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ABSTRACT

This collection of articles on school reform and restructuring is intended to supplement the video series "Every Child Can Succeed," a set of videos presented on public television that includes a demonstration component, a successful-schools component, and an essential-elements component. The 50 articles of the collection describe schools across North America where teachers and administrators have found ways to make sure that every child can learn and achieve in spite of minority status, lack of English proficiency, family collapse, poverty, and other problems stemming from urban decay or rural isolation. Other articles discuss the following eight elements of effective schools that have been identified in research: (1) staff development, (2) instructional and school leadership, (3) high expectations, (4) parent involvement, (5) productive climate and culture, (6) monitoring, (7) learning essential skills, and (8) effective instructional strategies. A third group of articles records current thinking on school reform by such writers as James Comer, Asa Hilliard, Herbert J. Walberg, and Daniel U. Levine. (SLD)

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Every Child Can Succeed: Readings for School Improvement

Every Child Can Succeed: Readings for School Improvement

A collection of articles on reform and restructuring,
successful schools, and the essential elements of effective
education compiled to accompany the video series
Every Child Can Succeed.

Selected and edited by

Alan Backler

Sybil Eakin

Agency for Instructional Technology
Bloomington, Indiana

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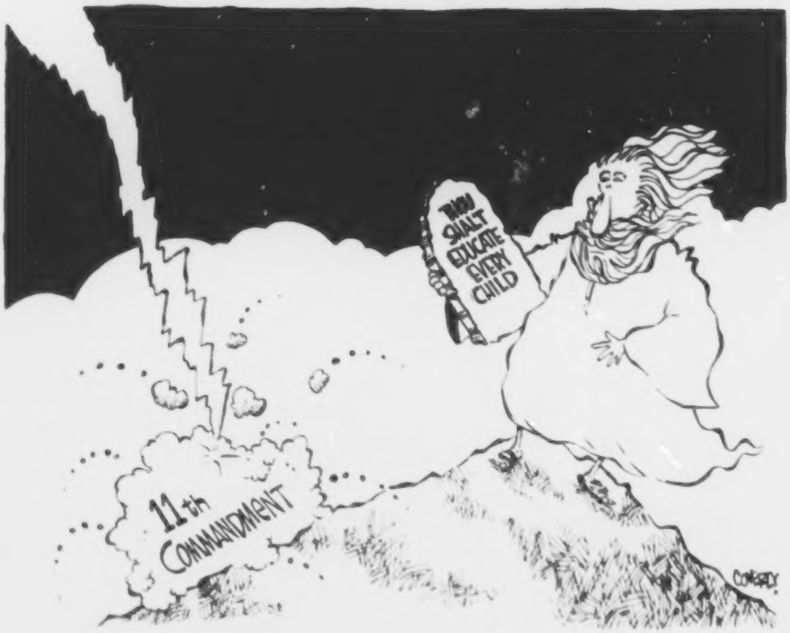
THOU SHALT EDUCATE EVERY CHILD
11th COMMANDMENT
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Success—for Every Child in Every School

by Asa Hilliard III

Chief Consultant, ***Every Child Can Succeed***

Almost every educator wants desperately to believe that all children can learn. If asked, most will declare that they do indeed believe this. Teachers and administrators have embraced, to varying degrees, the goals of Education 2000 and other school improvement objectives. They recognize that the future of today's young people depends on the quality of the education they master.

Yet many educators nurture doubts that they can produce the educational outcomes they desire. Such teachers and administrators are on the front lines of the social and economic problems that undermine families, destroy large areas of cities and rural areas, and deprive many children of the psychological and intellectual support that helps them thrive in school.

Too often we have heard that single-parent families are a problem. We are told that a child who comes from a family that doesn't speak English will be deficient in the school setting. We hear so often that children who come from drug-infested neighborhoods are doomed that we begin to see no point in trying to help them.

Of course, all of us would like to see these problems reversed. No one thinks that such conditions are actually *good* for a child, but as long as society assumes that school failure is caused by social, economic, and familial problems beyond the control of the education community, there is little will to raise achievement levels among large numbers of poor, minority, or limited-English-proficient students.

Yet it has been shown, over and over again, that not a single one of these situations accounts for the low performance of any school child or group of

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Asa Hilliard III is Fuller E. Callaway Professor of Urban Education, Georgia State University, University Plaza, Atlanta, GA 30303.

students. We know that it is possible to overcome the negative effects of some of society's worst problems. A number of schools in ordinary districts are doing this without resource to magic, extraordinary talents, or huge grants, but rather by using standard resources, traditional techniques, and a great deal of determination and hard work.

As Jonathan Kozol argues in *Savage Inequalities,* the problem of poor academic performance lies not with the children, but with the educational services they receive. Some schools have rejected the notion that poor achievement is the result of a deficit in the child or in his background. Instead, these schools believe that all children can learn, and that it's the school's job to teach them.

The debate about the cause of school failure is more than academic. The question of the unequal distribution of resources and talent among our nation's schools has profound moral and ethical implications. More to the point for public education policy, the issue has vital economic implications as well. Dr. James Comer, psychiatrist and educational leader at the Child Study Center at Yale University, has graphically described the threat to society that is already developing and will increase if we do not commit ourselves to providing a challenging education for all children.

> The danger is that we can't stand as a society with a continued low level of funding for education among that group of children most vulnerable. We can't stand it in our society much longer, or we'll pay the price very soon—it's already happening—and it'll be terrible. There's a geometric progression of social problems, because the undereducated children can't be absorbed into the economy in unskilled jobs any more. So, one kid who doesn't do well in one generation means there will be five in the next generation, 25 in the next, and 125 in the next. That's a very real education problem in this country.
>
> —from an interview in TECHNOS Quarterly 1:4 (Winter 1992)

To reverse this geometric progression, we must look at the schools where, in spite of all odds against them, children *are* succeeding. We must find the schools where the staff never loses faith that each child can and must perform at a high academic level. We need to visit a variety of schools where the students, against all expectations, achieve test scores and other results that are among the highest in their districts.

Every one of these remarkable schools is inspired by a fundamental belief that is shared by its entire staff and communicated to every parent and child who enters: Every child can and must be taught; every child can and must learn; and if children do not learn the way they are taught, then the staff must find a different way of teaching.

In the video and print project ***Every Child Can Succeed***, we've sought out and filmed some of these schools. We've talked to principals, teachers, and parents; we've visited classes, examined student work, and reviewed test scores. We have done so because we believe that "seeing is believing," and most principals, most teachers, and most of the students and faculties that fill our teacher-training institutes have never seen a school that worked. These schools vary enormously in location, structure, size, and resources, but all of them share the same essential belief, and they incorporate it into their mission statement. Our findings about eight of these schools are recorded on the six videotapes in the Successful Schools component of the series.

The programs show that at these schools all programs and activities are designed and then constantly monitored for their consistency with the school mission. The staff continuously appraises what it is doing: Is the curriculum helping *all* children achieve? Are present class groupings producing a shrinking discrepancy between white and minority children's test scores? Is staff development providing teachers with instructional strategies suitable for a greater variety of learning styles? Do discipline policies result in positive behavior with minimum class disruption? Are schedules designed to provide a maximum of uninterrupted teaching and learning time? Whenever the answer to such questions is "no," the principal and staff immediately develop a plan to remedy the situation.

All readers interested in helping schools raise the achievement of disadvantaged students will find useful and suggestive reading in this book. Its organization reflects the three components of the project ***Every Child Can Succeed***. The first section of this book contains articles from newspapers and other sources that provide descriptions of the schools in the Successful Schools component and profiles of the principals who have turned them around. Whether or not you have seen the video programs, you will learn much about the operation of successful schools from these accounts.

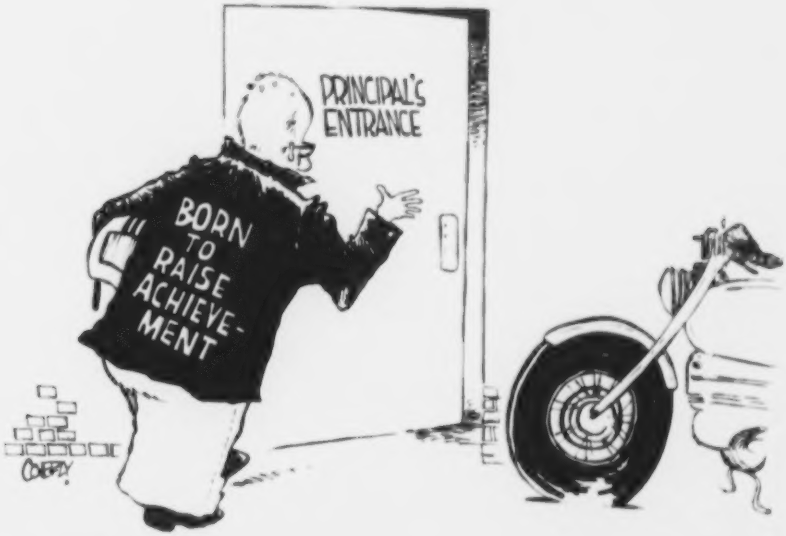
Examination of these schools and the research of such groups as the National Center for Effective Schools (within the Wisconsin Center for Education Research at the University of Wisconsin–Madison) have elicited eight "Essential Elements" that are present in all effective schools. The Essential Elements component of the video project contains nine programs analyzing these elements. The complementary section of this book presents articles giving in-depth background about each of these. (In the video project, the topic of leadership is presented in two separate programs, "Instructional Leadership" and "School Leadership." Both aspects of school leaders have been touched on in the articles collected in the "Instructional and School Leadership" section here.)

The middle section of the book corresponds to the Demonstration component of the video series, which contains two video programs, one presenting the problem of low achievement in too many schools and describing the entire video series ***Every Child Can Succeed*** and the other presenting suggestions for utilizing the project. The corresponding section of the book presents a number of articles relating to the implementation of a process of school reform in schools.

The articles emphasize that no process of school improvement will succeed if it is simply imposed on a staff from above. Furthermore, no blueprint for school improvement will apply to all schools. Principals and staff must appraise their own programs and decide how to implement each of the elements listed in a way that is consistent with particular situations in each school. Most of all, no improvement process will accomplish anything until everyone connected to the school is persuaded that it *will* work—that indeed all children can succeed, and every school can help them do so.

We have no choice. The children in our schools today will lead our nation into the next century. Our future will be as successful as they are. ◀

Successful Schools


PRINCIPAL'S ENTRANCE
BORN TO RAISE ACHIEVEMENT
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Maverick Principal Brings Out the Best

Vann School's All-Black Pupils Excel

by Mike Pellegrini

Reprinted with permission from *Pittsburgh Post-Gazette* (June 6, 1990).

Since becoming principal of Vann Elementary School in the angry days following the assassination of the Rev. Dr. Martin Luther King, Doris Brevard has devised an exceptional educational program.

Pupils at the all-black school—most poor, many from troubled families—routinely outperform white pupils who live far from the Hill District's mean, drab streets.

In the 1989 California Achievement Tests, 91 percent of Vann's pupils scored at or above the nationwide norm on the mathematics portion of the exam. By contrast, at Bon Air Elementary, a middle-class school where all the pupils were white, 86 percent scored at or above the norm.

Vann's pupils have been above the districtwide scores for white pupils in math in three of the last five years. And on the 1988 and 1989 exams, they also scored better in reading.

But despite her success, Brevard has endured a curious silence from her peers and superiors over the past 20 years.

No press releases chronicling her school's achievements have been written by the district's well-oiled public-relations machine, and Richard C. Wallace, superintendent of the Pittsburgh Public Schools, has had very little to say publicly about her success.

Today, Gov. Casey is scheduled to visit Vann, but that trip was arranged only a little more than two weeks ago, according to state officials.

Asked about the previous lack of attention, Brevard, a handsome, friendly woman of 59, said, "We've had visitors from all over the United States and Europe come to this school, and they've been very pleased by what they have seen. But from Wallace? Nothing much. It might be because Vann's reputation was well established before he got here."

The reason, though, may be more complex.

Brevard's supporters say her approach has worked because she has done things her own way, using methods that sometimes have gone against the grain of school district practices.

Among other things, Brevard has always grouped pupils by ability, allowing them to move forward only after they have mastered lower-level material. She has refused to promote most pupils who don't meet academic standards. She has championed "teacher-centered" classrooms, which means that most of the time, teachers talk and students listen. And perhaps most controversially, Brevard has refused for years to hire teachers assigned to her school unless they met her expectations.

And while the Pittsburgh schools have actually lost ground in recent years in trying to close the achievement gap between black and white students, Vann Elementary's pupils continue to outperform most other schools in the district.

Her Way

One possible explanation why Brevard has not been recognized is that she has been fiercely independent from the day she became Vann's top administrator.

When Brevard took over at Vann in 1968, the first thing she had to do was respond to Hill District militants who were espousing black nationalism in the days following King's assassination.

"It was a bad situation. The white teachers in the building didn't feel safe," she said.

"People in the community were teaching their children to be disrespectful of the white teachers. We had to let people know that the school was for the children and that their teachers were going to be safe."

Several of the school's teachers came to Vann with Brevard, and became the nucleus of a group of instructors who shared her educational philosophy.

"In general, the faculty was very supportive of the changes I had in mind. And the PTA here supported me to the hilt.

"My feeling was that if you had the right educational climate, there would be no excuse for teachers not being able to teach. And creating that atmosphere was the principal's job."

The result?

At least 15 years of above-average achievement, according to Barbara Sizemore, who has tracked standardized test scores at Vann since 1975 and is one of Brevard's biggest backers. Sizemore, former superintendent of the Washington, D.C., schools, is now a professor in the Department of Black Community Education Research and Development at the University of Pittsburgh.*

---

*Since this article was written, Sizemore has taken the position of Dean, School of Education, De Paul University, Chicago. [ed.]

One of the factors Brevard and Sizemore cite as the reason for Vann's success is an emphasis on maintaining order and striving for excellence.

While classes in many Pittsburgh elementary schools are relatively unstructured to encourage free exchanges between students and teachers, Brevard favors "teacher-centered" classrooms and direct instruction. Teachers are to spend as much time as possible on course work and students are expected to sit quietly and absorb their lessons.

Citing social reasons, some schools also are reluctant to fail students at the elementary level.

But Brevard routinely holds back students in grades one to four when they lag too far behind their classmates. So-called social promotions are given only to fifth-grade students, because she believes that at that point they would be too old to fit in well at the elementary level.

Brevard also encourages teachers to informally group students by ability. Only when a student, based on frequent tests, demonstrates mastery of a lesson is the student allowed to tackle more difficult material.

Most important, perhaps, Brevard has steadfastly refused to accept automatically the teachers assigned to her by the central office.

Only after conducting a lengthy interview in which she determines that a candidate is willing and able to meet her expectations does Brevard invite the person to join her staff.

"Wallace doesn't accept what I do," Brevard said of her methods, "but there's not much he can do about it."

But the superintendent denied that he disagrees with Brevard or her approach.

"I'm not the least bit unhappy with what Doris Brevard does or expects of her teachers and students," Wallace said.

He acknowledges that Brevard has not received much official recognition from his office, but he said that he is working with her and several other principals of successful black elementary schools in the district to learn which of their techniques could be applied to schools that are not doing as well.

"With children from poverty and minority groups," Wallace said, "a lot of them come from very unstructured home environments. Doris believes they need structure, and I support that."

He also noted that in recent years, all elementary principals have been given a list of the top teacher applicants for openings in their schools, and then have had the right to hire only those candidates who satisfy them.

Support

For many years now, Barbara Sizemore has wanted to shout from the rooftops that black children can and do learn.

At first, though, she squelched that impulse.

"I first saw how [black achievement levels] could be raised when I became principal of Anton Dvorak Elementary School in Chicago in April 1963," Sizemore said.

"When I got there, all the students at the school were African-American or Hispanic, and it was ranked near the bottom.

"[It took us a year] to make significant progress. And at the end of the second year, it was ranked somewhere in the middle. I knew that if I could do it, anyone could do it."

At the same time, the poor performance of black students in Chicago's schools was a frequent topic of conversation.

"So I began urging that we talk about this school, make a model of it, show that African-American students could do as well as anyone," Sizemore recalled.

"Then I heard from black leaders. They told me that if we discuss this openly, the argument would be that black kids can be educated in segregated forums, and that would be anathema."

Sizemore kept quiet then, but consumed by the subject, she set about identifying high-achieving minority schools around the country.

In Dallas, they were Lincoln High School and Charles Rice and Maynard H. Jackson elementary schools.

In New York City, they were the elementary schools of Community District Number 13. In the public schools of Washington, D.C., where Sizemore was superintendent between 1973 and 1975, it was Mildred Green Elementary School.

When she arrived in Pittsburgh in September 1977, she discovered Vann.

By then, her reticence on the subject was decreasing. She approached then-superintendent Jerry Olsen about studying Brevard's program, publicizing its effectiveness and using it as a model.

"He told me, 'I can't do that because it would make it seem that my other teachers and principals aren't working hard.'"

Olsen wasn't alone. For a variety of reasons, superintendents and school boards in all parts of the country haven't been eager to talk about their Vanns.

"When you have unusually good student performance, you have unusually good staff," explained Walter Hathaway, director of testing and evaluation for the public schools in Portland, Ore.

"If you started studying such schools and drew the appropriate lessons, you'd have to fire a third to a half of your staff, and that's just not politically possible."

Educators also are wary of drawing too many conclusions from the results of standardized tests because of charges that the exams are racially and culturally biased and because many believe they are imperfect measures of student performance.

"Tests measure a narrow range of curriculum and lower level skills, such as basic math, literal comprehension and basic vocabulary," said Joyce Herman, a researcher in the Center for Student Evaluation at the University of California at Los Angeles.

"You have to look at multiple indicators, such as standardized test scores, attendance and dropout rates and writing ability because writing and thinking are closely linked."

Then there is the feeling that Brevard and principals like her can't be cloned.

"The characteristics of successful principals are well known," said Joe Mills Braddock, head of a research program on effective schools at Baltimore's Johns Hopkins University.

"They're strong leaders, create supportive climates and have high expectations for their students and teachers," he said.

"In some way, they're able to change things profoundly for the better. Often, though, what they do is idiosyncratic, is the product of their personality, and can't be duplicated."

Setting the Tone

"There's always a movement in education," Brevard said.

"It just goes from one end to the other. One minute things are supposed to be structured, the next unstructured.

"Now, everything is supposed to be casual—children are supposed to be running the classroom."

But Brevard feels otherwise, and believes her students' test results have borne her out.

From time to time, Brevard said, she has wondered how her students have fared after leaving Vann.

"I've talked to teachers and principals in the middle schools and high schools, and the general feeling is that they are well taught, have good work habits and usually are well behaved."

But the district has never studied whether the preparation Vann's pupils have received has caused them to drop out of high school less frequently or have fewer discipline problems than pupils from other schools. The district also has not tracked Vann pupils to see if they graduate or go on to college at higher rates than other minority students.

Wallace said the district has not done such tracking with any elementary schools, but "I think it would be worth doing."

There is some evidence that all-black elementaries with strong programs can make a difference in later years of school.

In 1988, an all-black Catholic elementary school, Holy Rosary in Homewood, tracked 168 students who had graduated between 1978 and 1987.

The study showed that 94.8 percent of the 96 pupils who had graduated from Holy Rosary between 1978 and 1983 had completed high school and 96.7 percent of the 60 pupils who graduated between 1984 and 1987 were still enrolled in high school.

That compares with a general high school dropout rate in the Pittsburgh schools of 25 percent among both blacks and whites, or about 5 to 7 percent of the student body each year, Wallace said.

Sizemore believes it's possible to tell the difference between a good and bad school the minute you walk in the door.

"The good school is clean and quiet," she said. "There's no paper on the floor. The classrooms are orderly."

Of course, there is more to it than good housekeeping, she believes.

Sizemore said she was shocked when she visited another Hill District elementary school shortly after arriving in Pittsburgh.

"At Vann, discipline was handled by the principal. At the other school, it was unclear who was in charge," Sizemore said.

Brevard reviewed her teachers' lesson plans; at the other school it was rarely done.

"And at Vann the teachers had specific goals," Sizemore said. "If something didn't work, they'd junk it, look for something that would help them reach their goals.

"Because all the emphasis was placed on elevating achievement, fewer people were placed in special education classes.

"So what is the problem?" Sizemore asked angrily. "It's that no one cares if administrators in the district solve this problem.

"Look at Schenley and Westinghouse [high schools]. Are reading scores better? No. Are math scores better? No."

On last year's California Achievement Tests, only 29 percent of Westinghouse's 609 black students scored at or above the norm in reading and just 30 percent scored at or above the norm in language.

"When the district proposed establishing the [Schenley, Greenway and Brookline] teacher-training centers, I said I would support them if someone could tell me how we were going to measure their impact.

"The answer came back that we wouldn't be able to do that. So I said, 'Then why are we spending all this money?'"

Last year, the district budgeted almost $5 million for programs designed to enhance student performance, especially among blacks.

The largest amount, $4.25 million, went to the Schenley, Greenway and Brookline teacher-training centers.

In addition to learning about the latest theories on education during the five-week courses, the district's teachers, who get the in-house training on a rotating basis, are counseled on how to meet the special needs of black children.

Besides the centers, almost $420,000 went to the School Improvement Program, established to narrow the achievement gap in 12 predominantly black schools, and another $230,000 went to four programs that tutored and counseled black students and trained administrators in multicultural education.

Of the 15,000 students the district believed are at risk of dropping out before completing high school, 6,622 students, 5,052 of them black, are attending schools that are part of the School Improvement Program.

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Another 250 are enrolled in the tutoring and counseling programs. Teachers at Vann are among those who are sent to the training centers, but its pupils are not part of the special programs.

Wallace Replies

"What makes Vann unique is the atmosphere that Doris Brevard creates," Wallace said. "She has a very no-nonsense attitude and she's benefited from having a very stable faculty.

"But Doris Brevard isn't the only principal doing a good job educating minority kids in our district."

Saying he normally doesn't talk about principals "because there is a danger of developing some jealousies," Wallace went on to cite principals Larry Nied at McKelvy in the Hill District, Vivian Williams at Madison in the Hill District and Janet Bell at Westwood in the West End as others who have succeeded in raising the achievement of black students. He said the School Improvement Program made the difference.

At one time, Wallace, said, Miller Elementary School in the Hill District "ranked 57th out of our 57 elementary schools. Now it's in the top 20, thanks to the School Improvement Program and the work of its principal, Henry Stephens."

But when asked if superintendents are reluctant to talk about successful minority schools out of fear of weakening arguments for desegregation or embarrassing less successful teachers and administrators, Wallace replied, "You could say that much of that is correct."

An evaluation of the Pittsburgh Public Schools conducted by an external review team composed of educators from around the nation concluded in January 1989 that the district had experienced little success in narrowing the achievement gap between black and white students from 1984 to 1988.

The educators, who praised many other aspects of the district's operations, urged it to redouble its efforts to improve black student achievement, but offered no concrete proposals on how that might be accomplished.

"From 1978 on, there was a sharp reduction in the gap between African-American and majority students for several years" throughout the country, said Paul LeMahieu, director of testing and evaluation for the district.

"Then there was a marked retrenchment, with the gap fluctuating up and down, that was reported in virtually every school district" that kept track of test scores by race.

Pittsburgh school officials now say a 26-point gap exists between the percentage of black students and white students scoring at or above the norm on the California Achievement Tests, which is one of the most widely used standardized achievement tests in the nation.

Based on earlier estimates, the gap is six points wider than it was in 1980.

"I happen to think that as a district, we don't have sufficiently high expectations for all ethnic groups," LeMahieu said.

"But when you look at Vann, you see logical arguments, rational arguments why the scores have gone up."

The district has not taken Vann's results on faith.

To guard against the possibility that students are being coached to help them succeed on standardized tests, the district administers surprise tests in all of its schools, including Vann, once every few years.

The results? At Vann, the pop test results have mirrored the pupils' scores on the California Achievement Tests, LeMahieu said.

Mavericks Needed

"What is so sad is that you have to be a maverick to turn things around in education today. You have to go against every rule, every procedure," said Shirley Thornton, a deputy superintendent in California's Department of Education.

"And that's wrong. You should not have to be a maverick to be a successful educator," said Thornton, who joined the department after winning a reputation as an effective educator of minority students while serving as principal of a San Francisco high school.

"If you're going to be a successful principal, you have to be a risk taker," said Venson, head of Pittsburgh's School Improvement Program.

"You have to be willing to take the heat when you see a need to do something that is not in line with existing policy."

Venson pointed to Brevard's unwillingness to accept all teachers sent to her by the central office and her constant tinkering with the school's curriculum.

"Some principals resent her rejecting teachers because they're sent to them instead," Venson said. "Sometimes, she's accused of passing problem teachers on to other principals."

"And I'm sure the curriculum directors don't like her modifying the curriculum. But look, her clients aren't teachers or administrators. Her clients are her students and the community they come from.

"So she's raised expectations in the community. The parents know that nobody is going to do something to their kids unless they come through her first."

Sizemore wants the district to promote Brevard and others like her to the rank of supervisory principal and have them replicate their methods in four or five other schools at a time.

Such an approach, Sizemore said, would be less costly and more effective than the district's current efforts.

"In two or three years, we could have 20, 30 high achieving schools," she said.

Brevard, who is eligible for retirement in two years, said she would support such a plan because "many principals aren't aware how to approach black children on certain things—their experiences have to be taken into account."

We use the same teaching methods that are used at white schools, she said, "but we are more aware of our children's needs. Are they well fed? Do they have a place to study at home? Are they getting their proper rest? Those are the kinds of things we want to know." ◀

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Presidential Praise: S. Dallas Pupils Visit Reagan, Hear Achievement Lauded

by Kevin Merida

Reprinted with permission from *The Dallas Morning News* (May 21, 1987).

WASHINGTON—Eleven-year-old Carlton Dixon said he was surprised and thrilled Wednesday when President Reagan walked into the room and began touting successful programs for educating economically disadvantaged children.

"I almost couldn't believe it when I saw him," said Carlton, a fifth-grader and honor roll student at Charles Rice Elementary School in South Dallas.

Carlton was among 120 people representing 23 schools and education programs across the nation honored for academic achievement at a White House ceremony. The occasion was the release of the Department of Education's latest handbook: "Schools That Work: Educating Disadvantaged Children."

"Instead of high dropout rates," Reagan said in remarks at the Old Executive Office Building, "these schools produce high test scores, regular attendance and aggressive college placement records. In schools such as these, a child's home life or his parents' finances and education are no barrier to success."

"Schools that work for disadvantaged children," the president added, "are schools that believe they can make a difference. They don't use poverty as an excuse for failure and they don't wait around for new federal programs before they start to do their jobs."

"They know there are no such things as black values and white values, or poor values and rich values. They know there are only basic American values."

Accompanying Carlton in the Rice delegation were Principal Louise Smith, third-grade teacher Irene Redmond and PTA President Barbara Fowler.

Ms. Redmond called the president's speech "fantastic, inspiring; it made you feel very good to be a teacher."

Rice, whose student population of 840 is 99 percent black, virtually all of whom are from low-income families, has received national acclaim. It was mentioned by Reagan in a previous speech as one of the top schools in the country and was visited in December by Education Secretary William Bennett.

The Houston Independent School District, where 83 percent of the students are disadvantaged, is the only other education institution in Texas represented in the handbook. The district was cited for "numerous programs that involve businesses, volunteer organizations, parent groups and individuals. The successful partnerships in the HISD exemplify the city's commitment to providing all children with a quality education."

The guidebook's recommendations included giving state and local districts greater discretion in adopting strategies that will be most effective with disadvantaged students.

In its "Support Improvement" section, the handbook notes that Rice, as part of a court-ordered alternative plan to busing, exceeded its goal of raising reading test scores by 10 percent each year for children in grades 4–6. A number of special programs, including an after-school homework center and specialized music education, have contributed to greater achievement, the handbook notes. It says that daily attendance at Rice is 97 percent, with the vast majority of sixth graders performing at or above grade level.

Ms. Smith, the Rice principal, said one key to the school's success has been allowing teachers the time and freedom to be creative. She said she also doesn't tolerate classroom disruptions or student antics.

"Play on the weekends," Ms. Smith said she tells students. "You don't have time to play. Every kid in that building knows they are there to learn. Don't play with me. I won't have it." ◀

Principal Kicks Out Urban Dragon

by Bill Graves

Reprinted with permission from *The Oregonian* (January 28, 1991). Copyright 1992, Oregonian Publishing Co.

■ *A leader who demands excellence lifts a Dallas, Texas, elementary school above the fires of poverty and decay and provides a model for cities across the nation.*

DALLAS, TEXAS—A quick stroll through Charles Rice Elementary School is all it takes to see what matters to Principal Louise Smith. The wide halls are bright, clean and quiet. Maps, trapezoids, parallelograms and other instructional figures are painted across their walls. On one stands Bart Simpson with incongruous words ballooning from his mouth: "My expectations are high!"

In the middle of one hall, fifth-grade boys stand silently in line, waiting for others in their group to return from the lavatory. There is not an adult in sight.

Dozens of plants and vines climb up the walls and over the counters between trophies and plaques in Smith's office. Posted in the hallway outside are test scores that show students thrive here too. Charles Rice students perform far above the district average, just as they have since Smith arrived.

When she arrived in 1984, the school was foundering under the forces of poverty, drugs, gangs and family disintegration—fires of an urban dragon that ravages schools in cities across the nation, including Portland. Students lacked discipline, missed school, read poorly and stumbled in mathematics. Smith didn't slay the dragon, but she kicked it out of Rice.

It still lurks in the neighborhood, pressing on the schoolhouse door. Rice's clean brick walls rise amid small, clapboard houses in a worn South Dallas neighborhood that has one of the city's highest rates of crime, gangs and drugs. Nearly all 860 students at Rice are black; 78 percent come from poor families. About half live with grandparents. They are what educators call students at risk.

But Smith refuses to let problems at home become excuses at school. Teachers are expected to teach; students are expected to behave and learn. That's their jobs.

"In the end, I want it done," said Smith in her soft-spoken Texan accent. "It can be done. It can be done on a wholesale basis."

And if it is done at Rice, it can be done in inner-city Portland schools with high concentrations of disadvantaged children, says Ron Herndon, co-chairman of the Black United Front.

The Front wants the Portland School District to draw on the expertise of principals at 22 exemplary schools across the nation, including Rice, as part of a broader plan to improve all schools, especially those in North and Northeast Portland.

But the board has not adopted the plan, and half of Portland's black students score below grade level on tests in math and reading. In protest, the Front has called for a districtwide boycott of Portland schools on Feb. 4. If Smith can kick out the dragon, Front leaders ask, why can't Portland?

Some Portland schools do measure up to Rice, says Superintendent Matthew Prophet. One reason they all don't may be that strong-willed principals like Smith are hard to find.

More than anything else, it was Smith's leadership—her rejection of mediocrity and her sharp focus on instruction—that turned Rice around, teachers said.

"She demands excellence; she is a model," said Gayle McVey, a sixth-grade teacher.

A Dallas native, Smith had 10 years' experience as a music teacher, home school counselor and primary school principal before she showed up at Rice.

She found a school in trouble. Students were scoring as low as the 9th percentile on national standardized tests. Four out of five of them qualified for remedial classes. Smith refused to accept such widespread failure.

"Surely, these students have brains," she said.

She set out to create new attitudes and a new school climate based on two goals: excellent behavior and excellent academics.

She demanded order and, if necessary, would swing a paddle to get it—an option outlawed in Oregon. Students at Rice were not allowed to roam the halls, hang out in restrooms or waste class time sharpening pencils.

Smith came to Rice at a time when grades four through six were being added as part of a district reorganization plan spurred by a desegregation suit. Because of its large concentration of disadvantaged students, Rice became one of 10 learning centers selected for extra resources. Even the teachers are paid more.

That gave Smith a chance to pick and lure teachers who shared her commitment.

Clearing Out Deadwood

Still there was deadwood, and she aimed to clear it out, a chore easier in Texas, where teachers unions are illegal, than in Oregon.

"How much longer are you planning to stay?" she asked one teacher who had been at the school 29 years. The teacher left the next year. So did others who could not meet Smith's rigor, making room for others who could.

"She has a good core of high-performing teachers," said Yvonne Ewell, vice president of the Dallas School Board. "You just can't have good schools unless you have good teachers and good principals."

Smith expected teachers to spend every minute of class time teaching, not grading papers or passing out busy work.

Even naps in kindergarten were out.

"They can sleep and play at home," Smith said.

The dragon backed off.

Scores increased 20 percent in the first year, and Rice climbed from 88th to first among 139 schools in a school effectiveness survey. The rankings were based on achievement gains but also were weighted to account for stiff socio-economic pressures on schools like Rice, school officials said.

Rice students last year scored well above the district average in all subjects and above the 70th percentile of all students nationwide on standardized tests in mathematics and language arts.

Still Unacceptable

But their median vocabulary scores fell between the 39th percentile and 45th percentile, and their reading scores were at the 48th percentile. Portland black students on average districtwide read at the 50th percentile, which is the national average.

"Our black kids are reading better than their kids," said Prophet.

Smith acknowledges that the reading and vocabulary scores are unacceptable and says her staff is focusing on bringing them up.

"This is one of the most difficult areas to make leaps," she said.

Most educators agree that test scores are only one measure of school success. Another is attendance rate, which is 96.4 percent at Rice, higher than any elementary and middle school in Portland.

"It is a superior school, an excellent school," said Sandra Malone, who oversees the Dallas district's 10 learning centers.

It didn't take long after Smith's arrival for Rice's reputation to spread. William Bennett, then U.S. secretary of education, visited the school in 1986. So did the minister of education from England. President Reagan called it one of the nation's best schools in 1987. Elite private schools in Dallas enroll Rice graduates, offering most scholarships.

"Most of the boys that have come to us from them have really done quite well," said Edward Young, director of admissions at St. Mark's School of Texas.

"They send us more than any other predominantly black elementary school in the city."

But Smith knows that she and her teachers are in a war against social forces that keep getting worse, which means teaching must keep getting better. Test scores have slipped slightly in reading and vocabulary since a high in 1989, when Rice students scored at average or above in all subjects.

Smith sees herself in a perpetual battle that she considers her mission, her calling, her lifestyle. A tour through her school reveals some of her victories.

In McVey's classroom, sixth graders in small groups cram for an upcoming school spelling bee, studying such words as argosy, aerial, allegory, adjunct and academics. Down the hall, Nan McNight's sixth graders work in pairs at subtracting fractions. In the music room, four students each sit at a piano for their weekly lesson. The third-grade teachers are spending their planning period discussing ways to better integrate the subjects they teach.

Rice teachers are innovative. They have students tutor students. They look for ways to individualize instruction, connect subjects and extend lessons into projects. They visit parents at home and invite grandparents to tutor children.

"You try to make things less mundane," McVey said, "You try to put yourself in the child's place."

Teachers show students how math and science can be applied in daily life. Georgia Beatey works full time giving 340 students a week hands-on lessons in the science laboratory.

She and the school's computer specialist are teaching sixth graders how to use a National Geographic computer program that will link them with students across the country and in other nations. Rice is the only school in Dallas participating in the project.

"It is not textbook stuff, and that makes it real," Beatey said.

Students are pushed. McVey reads her sixth graders a story version of Shakespeare's "Julius Caesar." Kindergarteners encounter what most students elsewhere get in the first grade, and by the end of the year, many are reading. Older students are kept 45 minutes later than most students in the district for extra instruction.

Rice also strives to give students a taste of culture. Even Smith sometimes takes groups of students to the theater, opera or symphony.

Many students said they spend two hours a night on homework. They expressed mixed feelings about their unusual academic regimen at Rice.

"You don't go to sleep or get bored or nothing," said Danielle Foster, a sixth-grader who wants to be a Supreme Court justice. "The teachers make it fun."

Amy Tarver, a fifth-grader who worked her way out of a remedial reading class, said she likes the school but knows students who don't.

"They don't like the teachers because they paddle too hard," she said.

Smith wishes she could keep her students until they graduated from high school.

"By the time they left the 12th grade," she said, "they would be ready for Harvard."

For now, she just hopes she can give them a firm base of knowledge and enough self-discipline and curiosity to withstand the dragon's fire. As one lesson shows, Rice starts building those qualities early.

Three classes of kindergarteners sit on the floor in a bright classroom crawling with inflated dinosaurs. Wide eyes are fixed on Mary Piinto, who holds a brick of clay. She promises that dinosaur bones lie inside. The students fidget, not out of boredom, but curiosity. They take turns scraping away the clay in quest for the bones inside. Christon Conner chips off a healthy chunk.

"Oh, he sees something," Piinto says.

Sixty small heads rise, straining to see.

"Sit down on your bottoms," says Piinto.

Sixty small bottoms drop like trap doors to the floor.

So Smith's vision unfolds. Teachers stir student curiosity and demand discipline, delivering an inviting lesson sure to sink in and stay, like fossils in clay.

High Expectations Part of Successful Agenda

by Bill Graves

Sidebar to "Principal Kicks Out Urban Dragon."

Most educators agree all children can learn, but they are divided over whether all schools can soar to the heights of the best schools.

If Principal Louise Smith can turn around a struggling elementary school like Charles Rice in Dallas, Texas, Portland principals can do the same, says Ron Herndon, co-chairman of the Black United Front in Portland. Nearly all students at Rice are black; most are poor.

But there is not a district in the nation where every school is exemplary, said Principal Michael Jordan of Sabin Elementary School, which employs many of the effective practices found at Rice.

"Where in the nation is it proved that if one school can do it, every school can do it?" he asked.

Portland administrators and Herndon agree that their principals can profit from meeting principals such as Smith and visiting their schools. Portland administrators have been bringing in outstanding principals and visiting exceptional schools for years, said Superintendent Matthew Prophet.

Features and practices common to Rice and other outstanding schools are widely known among educators and present in many Portland schools. They include strong leadership, high expectations, clear goals, a warm but orderly school climate, strong parental involvement, a focus on students rather than operations and teamwork.

But replicating the special chemistry, culture and commitment of an exceptional school is more complicated, said Walter Hathaway, director of research and evaluation for the Portland School District.

Smith, however, attributes much of her success at Rice to sheer doggedness and sees no reason why all schools cannot match hers.

"It all boils down to how committed we are to doing what we have to do for the young people," Smith said. "That can happen anywhere."

All Dallas schools would be like Rice if the district had the commitment, competent teachers and resources, said Yvonne Ewell, a former administrator now serving as vice chairman of the Dallas School Board. "I know it is possible," she said.

Herndon thinks even more is possible.

He wants to see Portland use models such as Rice to turn around its struggling schools in a hurry. Then he wants the district to shoot higher.

Rice may be pushing the traditional school to its upward limits, but that is still not high enough, Herndon said. Half of Rice's students read below grade level and cannot compete with their peers elsewhere in the industrialized world.

Taking students to new heights will require new models, Herndon said. Resorting to traditional schools is like trying to fly to the moon in a biplane, he said.

"You have to have a vision that says, 'this is where we have to go, and there will be nothing that will keep us from getting there,'" Herndon said. "We're not even having those discussions." ◀

2 Inglewood Schools Defy Odds, Achieve Excellence

by Michele Fuetsch

Los Angeles Times (February 3, 1992). Copyright, 1992, *Los Angeles Times*. Reprinted by permission.

■ *Students match, even exceed counterparts in wealthier areas. Principals win high praise.*

When researchers from the Los Angeles Unified School District went looking for success stories among elementary schools serving low-income minority areas, they ended up at two campuses in Inglewood where high test scores seemed to defy the odds.

Schools run by Principals Marjorie Thompson and Nancy Ichinaga have allowed minority children to match and even exceed their counterparts in wealthier areas.

With no extra money or fancy enrichment programs, they have geared their scarce resources to the youngest children, adopted programs that focus on reading and fostered an atmosphere that stresses academic excellence.

Bennett-Kew Elementary School's Ichinaga acts as the crossing guard because there is no money for one and she does not want her teachers spending their time doing the job.

At Thompson's William Kelso Elementary School, 35% of students are from welfare families. But their sixth-grade scores on state achievement tests are higher than scores at 96% of the California schools with similar student populations.

James Baker, a Los Angeles police officer, liked Kelso so much that he bypassed private schools for his two daughters. They did so well that when they reached junior high school their teachers kept asking: "What private school did you come from?"

At Bennett-Kew, where the staff gives out college savings bonds each year to the brightest graduating sixth graders, two-thirds of the students qualify for free or reduced-price lunches. Third-grade reading scores, though, are higher than at 75% of all elementary schools, rich or poor.

Christine McAfee did not even mind when her seven-year-old son had to repeat the first grade.

"If this was anywhere else, he would have just been passed along," McAfee said. "I have friends and their kids' homework is not nearly as advanced as the homework my kids bring home."

Sandra Schieldge, a Bennett-Kew kindergarten teacher, recalled how indignant Ichinaga was when she arrived at the school 17 years ago and saw the low test scores.

"I'm not running a school for dishwashers," Schieldge said, mimicking Ichinaga talking to the teachers. "[These kids] will go to college."

Thompson and Ichinaga attribute their success to decisions they have made about what is important to teach—phonics-based reading—and what is not—bilingual education.

But the credit, many educators say, must go to Thompson and Ichinaga.

Despite distinct differences in style and background, the two women personify what many educators say is the most important factor in a high-achieving school—a dynamic principal.

Ichinaga is so involved with her school that she "knows the name of every child and probably their birth weight," said Ellen Cox, a teacher.

Thompson, a former counselor and learning disabilities specialist, tests every child who comes to Kelso to determine the pupil's academic level.

"She works harder than the teachers," said one student, Mary O'Donnell. "She's my idol."

Thompson came to Kelso 17 years ago. Because of a court desegregation order, it was in the midst of adding the fourth-, fifth- and sixth grades to the school. But it had no sixth-grade reading books.

"They sent me the kids but no books," Thompson said. "It took me two, three, four years to get that reading program going."

Despite her obvious delight in the children, Thompson insists that school is not supposed to be fun. Academics is the focus. This is not a school that has a lot of parties and candy sales, parents said.

Kelso and Bennett-Kew shine under various academic lights, said William Padia, director of the state education department's program evaluation and research division.

"Not only are these schools getting high scores," he said, "but both…are improving faster than the state [average.] That's very impressive."

State test scores have been rising an average of 8.5 points a year, Padia said. At Kelso and Bennett-Kew, they have risen about 11.5 points a year.

"When you walk into those schools, you know that student achievement is the focus," said Ruth Johnson, a Cal State Los Angeles education professor who worked on the Los Angeles Unified study. Only one inner-city school in Los Angeles was found that matched the successes in Inglewood.

Thompson and Ichinaga put their strongest teachers and the few classroom aides they have at primary-grade levels, emphasizing the importance of early academic success.

Neither school spends its supplemental federal money on extracurricular activities or remedial classes. Instead, they strengthen basic curriculum at the kindergarten and first-grade levels.

Ichinaga created special classes for children who have had a year of kindergarten but are not ready for first grade. It gives children "the gift of time to learn," she said.

Thompson's school is year-round, so she created classes between terms for children who need extra help with basic skills or English.

There is no bilingual education at either school, in part, Thompson and Ichinaga said, because parents do not want it. That was fine with the two principals because they believe the approach does not work.

"Our goal is not to teach them Spanish," Ichinaga said. "Our goal is to make them English literate."

The two schools teach English as a second language, which provides bilingual instructors but has children learning English the moment they enter school.

Thompson and Ichinaga also reject the state's new "whole language" approach to reading, which stresses comprehension and writing skills over a child's mastery of such mechanical exercises as spelling and punctuation.

Instead, they stress a phonetic approach to reading—how to sound out words—first.

But they are not rigid when it comes to curriculum. Cox, for example, is allowed to use children's literature instead of textbooks for her third graders.

Both principals emphasize reading, calling it the key to every other future academic success.

Low-income children, Thompson said, are "weak in vocabulary and in reading comprehension when they come to us. So, that's where we focus."

"I teach first grade," said Kelso's Shelly Chaplin. "I have to teach them to read there and if they don't learn that, they're going to have trouble all their lives. Push, push, push. We push the kids, but we make it fun to learn."

On a recent morning, Chaplin and her students were doing a lesson on middle sounds, vowels that appear in the middle of words: *snail, night, mole.* After sounding the letters out loud as a group, the youngsters would figure out a word's identity and write it in their notebooks.

"They kind of think this is a game but it's work," Chaplin said.

Thompson's school is so focused that during the first two hours of every day all 700 children do the same thing—read and write.

"You have to do that in prime time," Thompson said, explaining that children are most alert then.

Excellence is so important at every level, Thompson's teachers said, that for two years they went without a permanent janitor until she found the perfect person, someone who keeps the campus spotless.

The daughter of a school teacher and a school superintendent, Thompson graduated from the University of Chicago when its students did not declare majors. She went on to earn teaching, school psychology and special education credentials in Arizona and California.

At 64, she is gray-haired and no-nonsense, a woman of intellect and quiet warmth who cares about results, not recognition.

"I'm not the splash type.... I don't do PR," she said when asked why her success has not been more widely touted.

Ichinaga, 61, was born on a Hawaiian sugar plantation to Japanese laborers. She is a slight, energetic woman, passionate and outspoken.

"So many people in education have so many things in mind, they don't know how to focus and they don't prioritize," she said.

After graduating from the University of Hawaii with a degree in secondary education, she taught school and later earned a master's degree in education psychology at UCLA before becoming a school psychologist.

"I was not a good teacher, too bossy," she said, stooping to pick up a stray orange peel on an otherwise immaculate campus.

"I was a miserable teacher for the first five years. I thought kids learned by doing."

Now she knows better, she said. A self-described behavioral thinker, she said there are certain tasks children must learn in order to make their way successfully in the world.

"We teach our kids how to read from day one, in kindergarten, because we think teaching the kids to become literate is our primary objective," she said.

Willa Snorton, director of special projects for the Inglewood district, calls both principals "very focused, almost workaholic. They believe that children can learn, that they can excel."

What is more, Snorton said, they hire teachers who think as they do.

Lynette Souder, a third-grade Kelso teacher who has worked for both Ichinaga and Thompson, said: "They know a good teacher when they see one.

"They're really sound in how to reach the children," Souder said. "They're willing to get rid of less effective teachers and they're willing to get in there and help the teachers who are not doing a good job."

Last year, Chaplin and two other Kelso teachers took jobs at Los Angeles schools because they could earn $5,000 more a year. They are back at Kelso now, they said, because they missed Thompson's leadership. Teacher Jennifer Heath said what she remembers most about her Los Angeles principal is the reprimand she got for not using the requisite, district-approved colors on her bulletin board.

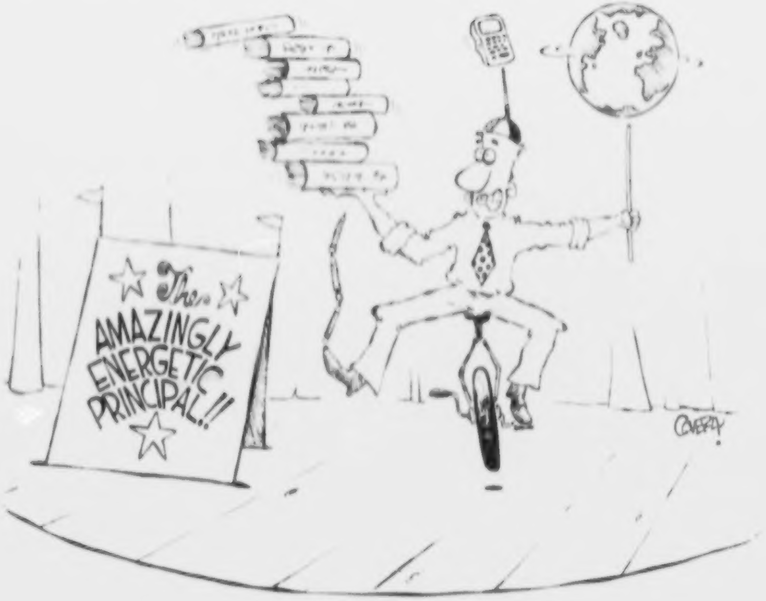
Roger L. Rasmussen, director of the Los Angeles Unified department that conducted the school study, said some common traits at Kelso and Bennett-Kew can be duplicated elsewhere.

Thompson and Ichinaga each consider themselves the "principal" teacher at their schools. They closely monitor teacher and student performance, and they encourage teachers to watch and learn from one another, rather than leave their classrooms to attend district-sponsored workshops.

Both principals are also devoted to making it possible for teachers to put all of their energy into teaching. In Thompson's office children walk back and forth through her work area from a classroom behind her office. The only other access to the classroom is through the teachers' workroom, and she does not want them disturbed.

Cal State's Johnson said that the most important thing principals such as Thompson and Ichinaga do is set high expectations for teachers and students.

"There is a belief system in those schools about the capacity of the kids to learn," she said. ◀



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The Gifted Bilingual Child: Two Needs, One Goal

by Victoria Siegel Steinitz and Joanne Lopez

Communicator (The Journal of the California Association for the Gifted) 22:2 (April, 1992). Reprinted with permission by California Association for the Gifted.

> *Where inability to speak and understand the English language excludes national-origin minority groups from effective participation in the educational programs offered by a school district, the district must take affirmative steps to rectify the language deficiency in order to open its instructional program to these students.*
>
> —*Justice William O. Douglas in the opinion delivered for the United States Supreme Court in* Lau v. Nichols, *414 U.S. 563.*

Justice Douglas identified the rights of language minority students to participate fully in a complete and appropriate educational program. School districts across the nation responded by implementing a variety of bilingual educational models designed to ensure that the students progress academically as they gain proficiency in the English language.

The question which comes to mind, however, is "Have we addressed the educational needs of language minority Gifted/Talented students?" It would be fair to say that they're a neglected minority with few, if any, programs designed to meet their needs.

Euclid Avenue Gifted/High Ability Bilingual Magnet in the Los Angeles Unified School District was conceived with this in mind. The District, Board Members, parents, and teachers recognized the need to create a quality program that could incorporate both bilingual and Gifted/Talented philosophies and methodologies. The magnet was to open in 1989–90 with four classes of Limited English Proficiency (LEP) students.

Magnet schools in the LAUSD traditionally have waiting lists, but the assumption that such a list would be useful here proved false. The waiting list reflected the lack of the LEP children on the rolls of the identified gifted. It was

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therefore necessary to create a tool to evaluate the potential of the applicants to the magnet. The combined efforts of the LAUSD Gifted/Talented office, the school site administrator and magnet coordinator, under the guidance of Dr. Sandra Kaplan, produced an informal instrument wherein applicants could be assessed in the areas of flexibility of thought, verbal ability, and patterning. (See *Communicator*, Volume XXI, Number 2, April, 1991). The assessment was conducted in the language of the child, with observers using a checklist approach to recording data.

The informal assessment tool yielded accurate findings, as many of the students have since been identified gifted by standard measurement tools. It had the added advantage of bringing in the high ability child who might not qualify using a standard method of identification. Once the classes were in place, the teachers set out to structure a program that met the goals of bilingual education while further nurturing and challenging the gifted/high ability child. The Thematic Approach, utilizing generalizations to drive the inquiry, became the focal point for curriculum development.

The second (1990–91) and third (1991–92) years brought an expansion of the magnet, which now serves twelve classes: seven classes of LEP students and five classes of Fluent English Proficiency (FEP) and English only (EO) students. Students find themselves in a challenging academic atmosphere where their needs as gifted/high ability students are met. They also find that their language needs are met, providing them with a program that enhances their native language or develops a new second language.

The Universal Theme and the generalizations help the teachers differentiate the curriculum for the Gifted/High Ability child. It provides the students an opportunity in either language to see relationships, draw conclusions, and develop insights. While ensuring the high level of thinking so integral to a quality gifted program, it is not dependent on fluency in English.

In addition to the core curriculum, Gifted/High Ability students at Euclid Magnet School participate in a modified form of mixing for second language instruction. All students are assessed in the second language (English or Spanish), then they are grouped by fluency levels within the primary, middle, and upper grades. This group is instructed in English or Spanish as a second language. For the beginners the focus is at a conversational level of listening and speaking. Reading and writing is added for the intermediate group. Vocabulary and language skills are enriched for the advanced students by weaving literature with generalizations of the Universal Theme. The ultimate goal of the second language component of the Bilingual/Gifted program is not only to provide second language opportunities for Limited English and Limited Spanish speakers, but also to provide advanced and accelerated language development in both Spanish and English.

A critical component of the second language acquisition aspect of the program is the teaching of art, music, physical education, and drama in the second language. Again, students are grouped by fluency in the second language. The teachers use the sheltered approach for instruction in these subjects. Concepts are easily investigated using demonstrations, charts, diagrams, graphs, or a hands-on approach. Vocabulary in the language is repeated and reinforced in this setting, providing experience and language in context. It is necessary to have teachers fluent in both English and Spanish in order to have a successful bilingual program. The Euclid Magnet staff consists of seven teachers with Bilingual Certificates of Competence, three teachers with Language Development Specialist Certificates, and two English only. Besides the language aspect, the staff has expertise in the instruction of Gifted/Talented and High Ability children.

The children who are Limited English students begin language arts in Spanish. By 3rd or 4th grade most students are ready to transition into English language arts. The Spanish language arts is maintained so that the child continues and accelerates language development in the primary language.

Eventually, students such as those in Mrs. Curiel's 5th-6th grade class will be considered "mainstream" pupils and redesignated to Fluent English Proficient. These students were observed one morning debating the Year Round School "pros" and "cons." The debaters moved in and out of English and Spanish with ease, fluidity, expertise, and comfort. This same group of students is then able to compare, contrast, and analyze using both of their languages, bringing a broader view to the Universal Theme (this year it is Systems) and their own lives.

This brings us to self-esteem. The Spanish-speaking child at the Euclid Gifted-High Ability Magnet School sees his/her primary language in a new light. It is a rich literary language as well as an academic language. Knowledge of Spanish is enriching—academically, socially, and culturally. The Hispanic student who is either non-verbal or non-literate in Spanish becomes aware of, and proud of, the importance of knowledge of Spanish—especially in Southern California.

The LEP child who is a High Ability/Gifted child and in a regular bilingual program has a need and a right to a differentiated curriculum. Take the case of Juan. His reputation as a difficult, disruptive child was schoolwide by the time he was a second grader. One teacher recognized many of his characteristics as those of a high-ability child. The Magnet opened, his parent applied, and Juan was able to begin a program that was challenging, exciting, and accelerated. He was in a setting that stimulated his creativity and his academic growth while at the same time provided for his language needs. Today he is an "Identified Gifted Student"—articulate in both English and Spanish. Without a bilingual Gifted/High Ability class he could have been another drop-out statistic.

It is well to remember that Juan is but one example. He typifies the language minority student and demonstrates the benefits of such a program. We cannot forget that the language minority student has the ability and the right to participate in an appropriate Gifted/Talented program. School districts that are sensitive to meeting the needs of students as outlined in the court decision have to expand the vision to include language minority students who are gifted or demonstrate high ability. Their "gift" should not be ignored while they gain fluency in the English language. To do so fails to provide them with an appropriate educational program. As advocates for the development of Gifted/Talented programs within the state of California we need to be a voice for the language minority student and insist on the expansion of the bilingual Gifted/Talented setting as an option for providing an appropriately challenging and enriching program. In this age of changing demographics, it makes sense for the proponents of quality Gifted/Talented programs to ensure that these programs take in our largest untapped minority—the language minority child. ◀

Documentary Focuses on Alki Elementary

by Dan Madden

Reprinted with permission from *West Seattle Herald/White Center News* (April 29, 1992).

After four years of successful restructuring, Alki Elementary School is going to be a star.

Chosen as one of only seven middle schools* throughout North America, Alki will be the focus of a documentary series which will be used nationally to aid other schools in similar restructuring.

"We're very proud that somebody saw merit in what we were doing," said Alki principal Pat Sander. "There has been a lot of blood, sweat, toil and tears."

The Agency for Instructional Technology (AIT), which will begin filming the documentary at the school May 4, chose Alki because of its high aptitude test scores, veteran staff, and its ethnically diverse student population (56 percent minority students and 44 percent Caucasian).

In 1987 Alki's test scores were at an all-time low, and the Seattle Post-Intelligencer listed the school as one of 20 schools in Seattle that needed drastic improvements.

The next year, Sander took over as principal and dove into the huge task ahead of her.

After meeting with her staff and parents of Alki students, she began overhauling the school's techniques, curriculum and overall approach to education.

Her first moves were to develop an early childhood program to give children a head start on their education, and to expand the reading program.

By stretching the reading block from only one hour to over the entire morning she was able to stagger classes, enabling the different reading levels to get more individual attention from the school's limited support staff.

Alki also became one of the first elementary schools to gain a site council—a group of parents, staff members and community members which shoulders much of the school's decision making.

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*Alki is actually a K–5 elementary school. [ed.]

Bill Stalzer, an Alki parent, who chairs the site council, gave praise to Sander as the catalyst in the school's turnaround.

"The key to success at this school has been Pat's ability to address the strengths," he said. "Rather than complaining about the lack of resources, we had to build on the strengths."

The result of the changes at Alki was a 12 percent jump in students' test scores the next year.

Although scores continued to rise at the school, something was still missing, said Sander.

"We were kind of fumbling along," she explained.

That's when Sander first heard about Stanford University's innovative Accelerated Schools program.

Accelerated Schools is a step-by-step program which tries to accelerate the progress of each individual student by eliminating academic stereotypes and labels, such as "remedial."

The program thrives on open lines of communication between the principal, staff and parents, with everyone taking an active part in the school's decisions.

Although Alki wasn't pegged as a pilot school for the new program, Sander actively pursued it for her school.

"The concept of shared decision making was already in place, and we were already doing things inherent to the program," said Sander. "Accelerated Schools provided us with a road map."

The documentary series, titled "Every Child Can Succeed," will consist of six 30-minute films,* each focusing on a different school. They will be aimed at school administrations that are struggling for the success of so-called "at-risk children." ◀

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*The Successful Schools Component of the series consists of six video programs and a facilitator's guide. Other components provide 11 additional programs and two guides.

Cookies, Cubes and Computers

Hands-on Way of Teaching Aims to Help Minority Kids

by Linda Yoshikawa-Cogley

Reprinted courtesy of *Seattle Post-Intelligencer* (April 16, 1992).

Noreen Burr's third-grade class at Beacon Hill Elementary School looks like any other. But subtle differences are at work.

When students review division, they group together colorful cubes on their desks to understand the concept behind division and "leftover" numbers.

In a reading and writing lesson, a child partners with a friend to write what they think will happen next in a book they've half read. Two boys huddle in a corner and discuss "Gentle Ben," a book about a bear.

When Burr reads a short mystery story, she asks questions that require an understanding of the story rather than a regurgitation of the facts.

When she teaches them the format for letter writing, students practice by corresponding with pen pals at Whitworth Elementary School. Two pen pals are in class visiting on this day, making letter writing worthwhile, Burr says.

"You make the work more relevant," she says.

Relevancy and hands-on lessons are characteristics of a new way of teaching in the Seattle school system. Officials hope children will learn better by this method, especially children of color.

The new approach—the Early Childhood Model—started three years ago in 18 Seattle schools and has expanded to 41 this year. The number will grow to 52 next year.

Many minority children are believed to be "global learners," requiring instruction that deals more with people than with symbols and abstractions. Such learners need more chances for expressive talking and more freedom to move around the class without being rebuked for misbehavior, educators say.

This particular style of learning crosses racial bounds, educators are quick to add. But by changing teaching methods in more and more classes, district officials hope that more minority children will do better.

"In the traditional way, you read the book and then answered the questions in the back," Burr said. "That just doesn't work with a lot of students. What you need are hands-on activities, making everything more meaningful and much more interesting."

Success so far is limited. Last academic year, for example, Beacon Hill improved student test scores in reading, language arts and math. But the achievement gap between white and minority children widened.*

On the far wall of Burr's class are full-length paper silhouettes of each student. Lessons in human anatomy are taught with paper organs that children have cut out, colored and pasted on.

"By cutting organs out, coloring them, it gets more cemented in their heads," says Burr, who had been teaching the traditional way for more than 20 years.

Her students read books of their choosing. When learning about fractions, they divide cookies into equal parts for their friends.

The district has several programs meant to raise student academic achievement and to lower disproportionality, the achievement gap between white and minority children.

Such programs include compensatory education, lessons to help children speak standard English, and coaching parents on how to read to their children. Also, new ways of running schools are being sought so that troubled children get attention.

James Comer, professor of child psychology at Yale University, has put forth the theory that most inner-city children begin school without the social, language and other skills needed for successful schooling.

His "Comer Process," in its first year in three Seattle public schools, aims at helping troubled children by involving parents and mental health counselors and changing a school's governance structure.

He used this approach in two inner-city schools in New Haven, Conn., more than 20 years ago.

In 1968, the schools ranked 32nd and 33rd in academic achievement among New Haven's 33 schools. Almost all the students were black and poor. By 1984, the two schools—with little change in their socioeconomic makeup—ranked third and fourth.

"Change can happen," says Louise J. McKinney, director of the Seattle district's Office of Academic Achievement. "It comes little by little. You always have to start small." ◀

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*Principal Gary Tubbs of Beacon Hill states that this statement is incorrect and was clarified on the editorial page by the district testing office. Beacon Hill *did* narrow the achievement gap in two of three areas. The 1992–93 test scores were up, too, in reading and language arts. [ed.]

Parents Get Help so Pupils Succeed

by Diedtra Henderson

Reprinted with permission from *Seattle Times* (February 21, 1991).

Laura Davis-Brown apologizes profusely. She's got a parent waiting for a return phone call. It will just be a second.

In the course of a few compassionate seconds, Davis-Brown empathizes with the mother's concerns for three children the state took away, queries about the status of the woman's imminent eviction, promises to call an alcohol-treatment center to try to get a bed before the March date she has been given, assures her that she'll take the youngest son to get a decent haircut when his wildly shaven head grows out, offers to shuttle the woman to a court hearing and plucks $2 from her own wallet for return bus fare.

A trained paralegal, Davis-Brown's previous job was helping public-housing residents suffering from fear, isolation and low self-esteem. She's now a family-support worker at Beacon Hill School. For the mother of three tethered to the other end of the line, the emphasis is on the word support.

Ultimately, the support Davis-Brown offers the woman will give her children a better chance of thriving in school.

"You're not going to see an instant result. People tend to move upward when they find…they do have self-worth," she says. "For me, if I can get a parent to reach out, that parent is taking that first step. And from that first step, they can grow."

For three years, the city and United Way have provided money so the program that hires people such as Davis-Brown can continue. It started with workers in just 10 elementary schools. The successful program is expected to expand to another 15 schools this fall, for a total of 35.

They call the staff members family-support workers. It's a bureaucratic term that sags and grays on the page.

In multicolored real life, it means mini-miracle workers such as Joyce Duncan who help subdue raging tempers and give clothes and food to 100 families at Wing Luke Elementary—nearly half of the school population.

It includes folks such as Gerald Donaldson at T. T. Minor Elementary.

Donaldson washes and dries the soiled clothes children wear to class and is searching for a shower so the children can cleanse their dirty bodies as well. His cupboards and shelves contain shirts, cereal, coats, baby juice, pants, wrapped hotel soap cakes and toilet-paper rolls.

It encompasses the energy of Davis-Brown, who on a typical morning connected a frazzled adult with parenting classes, kept an eye on rambunctious fourth and fifth graders stuck inside for a rainy-day recess, arranged for a home visit to ensure that a father got counseling information for his son and helped the principal diffuse tension among schoolgirls.

What the support workers do is simple: They help resolve problems that stand in the way of a child succeeding in school.

Support workers, teachers and administrators stay alert for signs of chronic absenteeism, neglect and abuse. They make home visits to let parents know what is up and what is expected from them. Because they are not connected with the state Child Protective Services that snatches children away and because they try not to be judgmental, the workers tend to make parents feel less threatened.

Donaldson at T. T. Minor is irked that many African-American boys are forced to waste precious learning hours in offices, waiting to see the principal. He has asked that children instead spend a few minutes in his office, learning which behavior is acceptable, venting some frustration and taking responsibility for their action.

As he speaks, a fifth-grader walks in, all smiles, to brag about a 95 he got on a spelling test. The man and boy had spent a homework session studying. Donaldson has started an adopt-a-class project to expose students to successful African-American men role models.

As a man, however, Donaldson has encountered a few problems working with single mothers. Hands full of groceries, heart full of concern for the schoolchild, he has sometimes seen his professional concern mistaken for personal interest. Lest he be misunderstood, he asks for meetings with parents to be held at T. T. Minor.

Donaldson thinks the program should expand to middle school, where children need the most support.

Scarce funds—the school district does not even fund the existing program—and a recent evaluation of the program indicate that is unlikely.

"Expansion…is clearly warranted, with a cautionary caveat. Too much broadening of the project's focus, or too rapid growth could reduce its effectiveness," the evaluation states.

The program works now because the support workers provide a vital link between parents and schools. At Beacon Hill more parents are coming in person to work out problems. At other schools pupils are trusting enough to come to the support worker to ease problems at home.

This week at Beacon Hill, Davis-Brown gave the woman a lift to her court hearing and lent an ear.

"It's whatever they need to get themselves together. You can't help a kid if you don't help the parents," Davis-Brown said.

"If we don't catch the kid and the problem now before they leave here, by the time they get to middle school they'll be lost."

Program Assists Pupils in 20 Schools

by Diedtra Henderson

Sidebar to "Parents Get Help so Pupils Succeed."

Started in 1988 at 10 elementary schools in the Seattle School District, the family-support worker program this year has workers assigned to 20 elementary schools. Workers tackle issues including latchkey children and family violence and help connect parents to food banks and counseling sessions.

Some observations:

- More than 1,170 pupils were served by family-support workers last year.
- Of those pupils, 65.7 percent qualified for free lunch; 7.3 percent qualified for reduced-fee lunch.
- About 52 percent of pupils who were helped lived with their mothers; 35.5 percent lived with both parents; 7.2 percent lived with a guardian.
- More than 39 percent of the pupils served were African- Americans; 29.6 percent were white; 11.3 percent were Hispanic and 8.6 percent were of Southeast Asian heritage.
- During its second year, 15 support workers made 519 home visits, provided transportation on 240 occasions and made three-month follow-up contact with 558 parents.
- City and United Way funding has grown from $247,938 the first year to $363,670 the second year.
- Support workers noticed inequitable treatment of African-American pupils, compared with white counterparts. African-American children have been suspended for fighting while whites have not, have been forced to stand outside classrooms for the entire day and are assigned at a disproportionate rate to special-education classes.

Source: City of Seattle Human Services Strategic Planning Office two-year evaluation.

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SAD 72* Principal Wins National Recognition

by Marita Wiser

Reprinted with permission from *The Bridgton* (Maine) *News* (October 3, 1991).

Gary MacDonald is a leader, an innovator and a dynamic force in local education.

His goal: the best schools possible.

"You can't keep doing things just because they've always been done a certain way in the past," he says.

Because of his hard work, MacDonald, principal of SAD 72's New Suncook and Sadie F. Adams Schools, is this weekend attending an awards program in Washington, D.C.

Last spring, he was selected as Maine's Distinguished Principal, one of only 59 administrators chosen nationwide.

The U.S. Education Department and the National Association of Elementary School Principals began the program in 1984 as an effort to recognize and honor principals who set the pace, character and quality of education that children receive during their early school years.

Nominated by their peers, the winning principals were selected because their schools are committed to excellence, have programs which meet the academic and social needs of the students and also have firm ties to the parents and the community.

MacDonald works hard to fulfill these goals, but credits his professional staff for his schools' successes.

"What gets me excited about education is seeing the kids as they progress. I want to create programs that meet their needs. I'm fortunate that I work with such a tremendous staff, one that is innovative, caring and energetic."

Lovell and North Fryeburg are located miles from the hubs of educational research. But MacDonald and his staff work hard to keep current with educational thinking and to incorporate the most relevant ideas into improved district programs.

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*SAD 72 = School Administrative District #72. [ed.]

MacDonald attended Marietta College in Ohio, earned a Master's Degree in educational administration from the University of Southern Maine in 1980 and received a certificate of advanced graduate studies in 1987 from the University of Maine at Orono.

He taught for nine years in New Hampshire Schools before becoming principal in 1982 of New Suncook, Sadie F. Adams and the Annie Heald Schools. Since the Heald School burned in 1986, those grades have been consolidated into the two other buildings. The job has expanded even further afield. During the budget cutbacks last year, MacDonald also served as principal for the C. A. Snow School in Fryeburg.

MacDonald's beliefs about education hinge on being flexible.

"Education is constantly changing. The society our kids are going into in the next 10 to 20 years is significantly different from the society kids emerged from 20 years ago. I'm not saying the programs we had 10 years ago were wrong; they were based on the best knowledge we had at the time," he said.

But as educators learn more about how children learn and what skills will be important in their lifetimes, schools and programs must change.

As a result, at MacDonald's schools programs are constantly being scrutinized and revised.

A hard-working staff has been a must. MacDonald credits also the district's participation in the Southern Maine Partnership. This alliance between USM and school districts keeps teachers updated on current educational research and thus enables them to create programs that meet the needs of today's youngsters.

Four years ago, New Suncook School tried combining kindergarten and first graders into a multi-age classroom. The program was so successful the school now teaches all kindergarteners, first and second graders in four multi-age classrooms.

The school also received an innovative grant from the state several years ago for a program called "Parent Educator Partnership" designed to help parents better understand today's schools. The grant money has expired, but the school is still actively working with parents, MacDonald said.

In 1989, when the school was under construction, MacDonald and the staff seized the opportunity to teach the youngsters about building and the building trades. In the year-long project, students toured the new addition as it was built, wrote in journals, took pictures and compiled it all into a published book called Children, Construction and Change.

MacDonald is most proud of improvements made to the district's language arts curriculum. Long before the Maine Educational Assessment Tests were grading writing samples, SAD 72 teachers were formally evaluating student's writing in the fall and spring and noting improvement, he explained. And the emphasis on writing has led to good test scores on the MEAs, he added.

And now he and other educators are revising the reading curriculum districtwide. "We should change, not for change's sake, but we should change to meet the needs of the kids."

For teachers to be able to review programs critically and make appropriate changes, they need to know what is the current thinking in education. So MacDonald tries to provide the staff with many opportunities to continue learning.

"We need to recognize that professional development is critical. It is a shared responsibility between the system and the individual teacher," he said.

Besides working to improve programs for the 275 students in his schools, MacDonald is concerned about finding secure funding sources for schools, and in accountability for education.

"The budget situation takes energy away from the areas I have the most interest in—working to create programs. We need secure funding for the schools. There is so much energy devoted to the funding aspect. It takes energy away from why we are all here," he said. ◀

Grant Opens Parents' Eyes about School System

by Laurie Severance

Reprinted with permission from *The Bridgton* (Maine) *News* (November 16, 1989).

The Parent-Educator Partnership project at Lovell's New Suncook School has proved to be a rewarding experience for both teachers and parents.

The project, funded by a $9,550 grant from the Maine Department of Educational and Cultural Services, is geared to improving the relationship between the school and community.

Since it began last spring, the program has come alive for its participants.

"At the beginning, the whole project seemed kind of vague," says Louise Maillett, one of the parents on the project's steering committee.

"We had the grant on a piece of paper. The concept sounded good but I guess it's like anything. Until you actually do something you don't really know exactly what it's going to be like. Once it started to unfold and we started some workshops it really surprised me. It turned out to be more than I thought it would be," she says.

The project began when committee members interviewed 15 citizens—parents, high school students and taxpayers without children in school. They asked questions about changes in the schools and the person's school experience.

But research with parents and teachers is one of the most important parts of the project. In August, 32 parents and teachers attended an introductory workshop on research conducted by Professor Lynne Miller.

Initially, the participants thought of research as something boring and technical.

Historically, research has been done "on" teachers and not "with" or "by" them.

This program involves teachers and parents in research.

"It's a whole lot more meaningful to do it yourself than it is to have somebody tell you that this is the right way to do it," said Gary MacDonald, principal of New Suncook School in Lovell.

Miller showed the group that research doesn't have to be technical. Information can be collected by watching, testing, interviewing and surveying, among other techniques.

Reflecting their interests and needs, parents and teachers suggested a variety of practical research questions.

Louise Maillett wanted to know how her three sons would react to a particular incident.

"They respond to the same things differently and I think just understanding that has helped me to respond to them. What this has done is it's caused me to slow down and watch them and consider them in normal circumstances," she says.

Valerie Wilfong is another parent who has found the research process enlightening. Her research involved following her six-year-old daughter, Liza, through the school reading program.

"I've been really interested to see how it works at different levels of the multi-age group which Liza is in. You can really take a look at how the reader progresses from kindergarten, first and second. They're all in together and you can really see a difference in the age groups," she says.

Michael Riley, the only father in the research group, wanted to discover if elementary age students are interested in math and science outside of the classroom. He posts challenging questions on his wife's shop bulletin board each week. The questions are geared to different age levels, asking things like why does it snow mostly in the wintertime and how long would it take to hear the shot heard around the world.

"What I've tried to do is catch kids wondering about them. I try to talk to the kids and find out how they feel about learning and how to solve things," he explains.

One of the main goals of the project is to help parents feel comfortable in the schools.

"I've done a lot of volunteer work with my kids in classes but there's always a feeling that you're an outsider," says Louise Maillett, emphasizing that it is not the teacher's fault. "You go and volunteer in the classroom but you're not a part of things. What I've seen this project do is put parents and teachers on the same level working together and the walls are broken down," she said.

In another aspect of the project, the parents learn how schools have changed since they were pupils in grammar school.

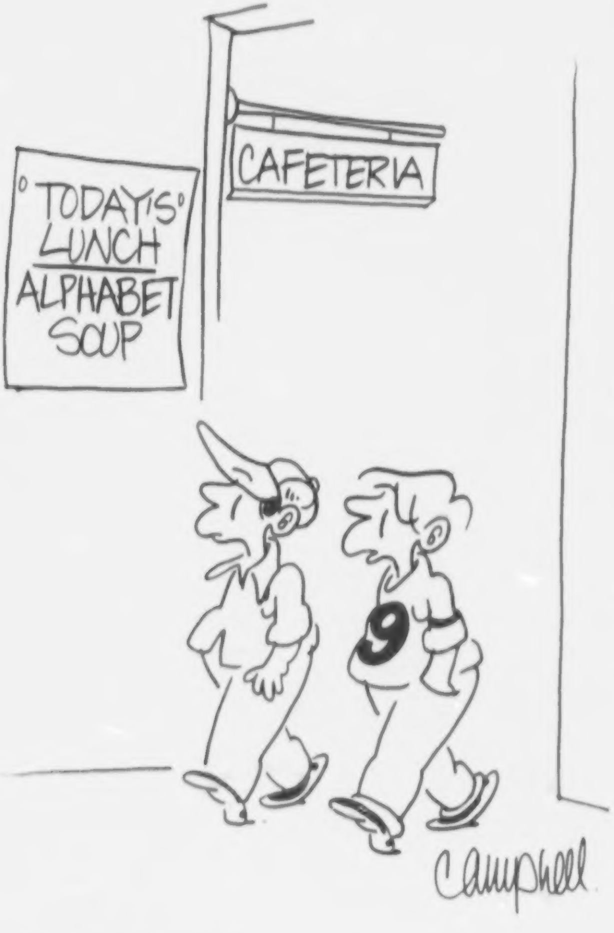
Mrs. Wilfong said she likes the improvements.

"They really do a mixture of things. They are learning through phonics and they're learning through the context of what they're reading and they're learning through memorization, too. They make up poems and do writings from their own experiences. They really have a little bit of say in the direction of their learning," she observes, adding that everybody is involved in some activity.

"You don't have to sit in a line and one reads as the others all look out the window which is what we used to do when we were kids," she says.

The project will continue throughout the school year with teachers and parents gathering information and then writing a report, but the report is not the most important part, MacDonald says.

"It's the process as much as the product and it's the reflective process that we're trying to get people to look at," he said. ◀



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"They never quit, do they?"

Restructuring of Instruction Leads to Innovative Assessment

by Rhonda Poliquin and Karen Johnson

Reprinted with permission from *Journal of Maine Education* 8:1 (1992).

■ *Teachers at a primary school find they must create new assessment procedures to keep pace with instructional innovations.*

Over the past several years, New Suncook School in Lovell, Maine, has been involved in the restructuring process. This process has included the creation of multi-age classes of five- to seven-year-old children. The following assumptions undergird the program:

1. Children operate on variable biological and psychological times and not on a uniform physical time.

2. Each child is unique with his or her own individual pattern of growth, personality, learning style and family background.

3. All aspects of children's development are integrated—physical, social, emotional, cognitive and aesthetic.

4. Children's learning is also integrated. They do not distinguish learning by subject area.

5. Primary-age children learn best through active rather than passive activities. Learning activities and materials need to be concrete, real and relevant to the lives of young children.

6. Opportunities to make choices help children to gain independence in thinking, decision making and problem solving.

The multi-age classes allow children to grow and develop at their own pace in an environment that encompasses a wide range of developmental levels. The curriculum is designed to be integrated, meaningful and relevant to the lives of children in the class. The classrooms contain learning centers and the children have many opportunities to make choices about their learning activities.

Ms. Poliquin and Ms. Johnson teach at the New Suncook School, Lovell, Maine.

In order for children to experience an active, integrated learning environment, instructional practices were carefully considered. The decision was made to use a theme-based curriculum. Children incorporated reading, writing and math skills to explore a theme at their own developmental levels. Instructional practices such as whole language, Math Their Way, the writing process, cooperative learning, and process science facilitated children's explorations.

To examine how well these practices were being implemented, an evaluation of the multi-age classes was conducted. Through a classroom-based innovative grant, multi-age class activities were documented for a school year. An observer followed nine children in different multi-age classes and recorded their daily activities. The data collected was then evaluated using qualitative research methods (Bogdan and Biklen, 1982).

The study found that indeed children were experiencing an active, integrated learning environment that allowed for individual developmental differences and opportunities for children to make choices to gain independence in thinking, decision making and problem solving (Potter, 1990).

The Need for Innovative Assessment

As these instructional practices developed, it quickly became apparent that traditional forms of assessment did not reflect the growth of individual children. Traditional assessment methods previously used assumed that all children develop at the same rate and do not take into account children's thinking, decision-making and problem-solving skills. New assessment tools were considered that would most accurately reflect a child's progress based on the assumptions of the primary classes. Alternative forms of assessment were discussed with educators from other primary programs through USM's Southern Maine Partnership.

After much discussion and field testing, the following methods were put into practice in New Suncook's primary classes:

Observation

Children are observed in whole group, small group and individual settings. Anecdotal records are kept for each child. Observations are done that do not "place children in artificial situations, impede the usual learning and development experiences in the classroom, or divert children from their natural learning processes" (NAEYC, 1991, p. 32). Teachers now have documentation of how students naturally approach learning tasks.

Portfolios

Samples of children's work based on assumptions of the multi-age classes are collected on a regular basis. Portfolio-based assessment is supported through the work of Grant Wiggins (1990):

> Portfolios often serve two distinct but often related purposes. They provide a **documentation** of the student's work, and they

> serve as the basis for **evaluation** of work. "Documentation" commits the teacher to deliberate collection: insuring that there is an insightful, valid record of each student's work in the major tasks of the class.... The "evaluation" process...[involves]...a judgment of the work's quality according to published standards.

After working with portfolios for several years, New Suncook has now established a uniform list of samples to be kept in a child's permanent portfolio. This list includes a taped reading conference, a self-portrait, a self-selected journal entry, a cumulative math assessment, a reading log, a research project and a fall and spring writing sample. At this time, portfolio assessment is being used within the school in grades K–2. Beginning with this year's exiting second graders, the portfolio will be expanded to follow children through fifth grade.

Sharing with Parents

As assessment practices have changed, it has also become necessary to change the way children's progress and learning are reported to parents. Parents were accustomed to letter grades in specific subject areas. Teachers found that this type of reporting method did not fully reflect children's progress in the multi-age classes.

The following methods of reporting to parents have evolved:

Magic Moment Books were based on books we learned of during a Southern Maine Partnership meeting. A teacher writes in the book about a proud moment the child has had in school. The child takes the book home and the parent writes about a proud moment the child has had at home. The teacher writes in this book as soon as possible when it is returned from home.

Weekly News is a dictated reporting of daily activities by children. As the name indicates, it is sent home once a week. It was developed by a member of our staff as a way of reviewing the activities of that day.

The New Suncook Newsletter evolved from a staff development need to communicate with parents schoolwide. Teachers in the school take turns contributing to the newsletter with information about activities in their classes. The newsletter often includes an article about parenting or education that might be of specific interest to parents.

Of Primary Importance is published and sent home bi-monthly. It includes a detailed description of activities occurring in the primary classrooms, upcoming events and an article about a different curriculum area each time.

Quarterly Progress Reports record a child's progress four times a year. A child's strengths and goals are reported in a narrative form in the following areas: intellectual, social-emotional, literacy and math.

Conferences occur once or twice a year or more frequently if requested by a parent or teacher.

There are several outcomes of this reporting process. Parents are better informed about what school is like today. With this information comes more support from and greater involvement of parents in their child's education. Parents are better able to understand what happens in the classroom on a daily basis and are able to partake in the "joy" occurring in the classroom. For the most part, parents have been very positive and appreciative of the time and effort they realize it takes to make the reporting process so individualized.

Product-Based Evaluation Criteria

After working with the assessment tools described, teachers individually and as a group have realized the need to formalize the criteria used to evaluate children's work. Through discussion, it became apparent that these criteria appeared to mark progress along a continuum in many areas. The Network of Renewing Schools, with the financial support of the UNUM Corporation, developed a grant program for schools interested in alternative forms of assessment. A grant was written and accepted from the New Suncook School that focused on expanding authentic assessments.

These assessments are being created in the district for reading and writing so that they are not grade-level based but product-based using a single set of standards. These standards will be in the form of a scoring scale that will include a set of descriptions for assessing where on the scale the students' work lies in terms of the ideal. The description of each point on the scale will correspond to important benchmarks on the road to competence (not grade levels). These benchmarks would provide teachers, students and parents with the most important telltale signs as students move toward the ideal.

These literacy assessments will also provide a valuable means of creating better understanding of the reading and writing processes. When basal readers or workbooks are used as a basis for a curriculum, there are obvious benchmarks for parents to monitor the progress of their child.

As New Suncook has emphasized the processes involved in literacy development, the benchmarks have become less clear to parents. The new assessment tools and reporting methods will clarify for parents how progress can be monitored in a process-oriented approach. These literacy assessments will be shared not only with teachers as a child moves from teacher to teacher, but frequently with the child and the child's parents.

Through field testing of these assessment tools beginning in the fall of 1991, it is hoped that revisions will be made to the instruments with input from both teachers and students. As these standards are being developed, it is also becoming evident that there will be a need to develop such standards in other curriculum areas as well.

As restructuring continues at New Suncook and other schools, constant reflection on assumptions, practices and evaluation will continue to be the basis for change. Just as developmental needs of children are being addressed through this constant reflection, so too are the developmental needs of parents and teachers. All players involved must go through the developmental levels of change or little progress will be seen in restructuring efforts.

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School Teaches Pupils to Learn

by Michael Norton

Reprinted with permission from *Maine/New England Sunday Telegram* (October 21, 1990).

■ *Multi-grade classes allow children to learn at their own paces, help each other and gain confidence in their abilities.*

LOVELL—The littlest children of the New Suncook School are exploring their classroom.

Two are matching letters of the alphabet, three are pondering a science experiment, an older boy is helping a kindergartener pick up toys, and Diana McAllister, a second-grader, is telling a visitor what an ungulate is.

"It's an animal with a hoof, like sheep, donkeys, horses, oxen and llamas. See," Diana commands and points to the classroom wall. Sure enough, the names of those ungulates and more are spelled out, with pictures not far away to match.

Diana's teachers are carrying out a new idea about how young children learn best. They have merged kindergarteners, first- and second graders into the same classrooms and, according to education experts, parents and test scores, are getting results that would make most primary schools in the state envious.

Lauren Potter and several other teachers began thinking about multi-grade classrooms more than three years ago.

They knew from their experience and training that young children develop emotionally and intellectually in ways that do not always match their ages. Five-year-olds could be ready for reading while older children were still struggling to crack the code.

Combining grade levels would allow children to learn at their own paces, to help each other and to feel more comfortable with their abilities. But the staff also would have to be ready to monitor each child's progress individually and provide a steady diet of learning activities for every ability level.

It doesn't take long to see the new structure's benefits at New Suncook. More than just taking down a few walls, teachers here have created a Sesame Street-like world where the children help each other learn, ask questions and don't even notice that they are foregoing mid-morning recess to learn.

These children have plenty of choices about what they will learn and when they will learn it. There are 30 "learning centers" available during their one-hour free time. Some are playful, such as painting or building blocks. Others require clusters of skills: reading, writing and scientific observation.

All the student activities are tied together by themes. Land is the banner theme for the year, which means learning about animals, which in turn means learning about ungulates. Ask the children, they make the connections.

Reading includes a huge variety of books at every reading level. Books change week to week to dovetail with themes.

"Everyone will be reading a book, not the Dick and Jane stuff, but something they chose," teacher Lauren Potter said.

It is not unusual to see an older student prompting a younger one with reading, or even vice versa.

There is no teasing or horseplay. Students get with the program because they watch their peers. When Potter needs to talk to the entire group, she asks them to put "hands on heads."

The clamor of activity drops instantly. Children patiently comply because they know instructions will be brief and clear, and that whatever comes next promises to be interesting.

There is no single secret to the program, Potter said, but respect, between student and student and between teacher and student, underlies the order.

To add another stunning layer to the scene, it is worth noting that nine of the 99 children in the four multi-age classrooms were in segregated special education programs last year.

One is mentally handicapped and two others had such difficult behavior problems that they had to be bused to a special school outside the district in the 1988–89 school year at a cost of more than $20,000.

"You can't pick them out," Potter said. She is right, you can't.

The old way of handling children with learning or behavior problems did not work as well, special education teacher Rhonda Poliquin said. They were pulled from regular classrooms or spent their entire day in the special resource room.

"We were asking the kids who have the hardest time adjusting to make the biggest adjustments," she said.

With a new, open format that stresses extra help from peers and teachers, it is not stigmatizing to have Poliquin make her rounds within regular classrooms and help these children.

"It's really neat for them that their peer group can be regular kids and not kids who are always in trouble or have problems learning," Poliquin says.

More advanced students also can take part in more challenging activities.

Kindergarteners normally stay for only a half-day, but one student stayed for the full day because her parents and teachers felt she was ready.

The school also has the option of keeping students in the multi-age room if they are not ready for third grade.

New Suncook has a traditional structure in grades three through eight,* but teachers cooperate on projects and stress hands-on learning throughout the building, said principal Gary MacDonald.

Another interesting layer to the story: All this is happening in classrooms with a student-teacher ratio of 25-to-1, considered high, and in a school district that cut its budget by $768,000 this year.

The multi-grade program at New Suncook lost a teachers' aide who had helped with the transition of special education children to regular classrooms. The budget for supplies also was frozen.

Teachers confess with some embarrassment that they buy supplies themselves. They also depend on parents who ship in supplies with the kids and drive students on field trips.

That cooperation makes the extra work of the new program easier to handle, teacher Susan Steller said. Steller added that even with the extra stresses she would never go back to the old way.

"The day works better this way," she said. "It just flows."

And New Suncook is getting results. Fourth-grade scores on the Maine Educational Assessment are well above the state and district averages.

The students score 335 on a 400-point scale in reading and 350 in writing. The state's acceptable score range for schools with a similar socioeconomic mix is 205–270.

Parents also rate the school highly. On a one-to-four scale, 77 percent of parents give the school a four for literacy training.

Large majorities also give the school a four for improving their children's self-confidence and abilities to solve problems and gain independence.

Loren Downey, director of professional education development for the University of Maine System, said New Suncook stands out for taking the initiative to get better without fanfare or a big budget.

"It's an excellent example of a principal and a school just deciding to go out and create the best educational program they can," Downey said.

MacDonald continues to change and evaluates each move carefully. Similar efforts to restructure grades failed in the 1960s because they were not monitored closely to see if practice in the classroom was following theory, he said.

New Suncook has had independent observers keep daily logs of what happens in its classrooms to check that lessons are functioning as planned.

Teachers also keep detailed records of each student's progress, including daily teacher notes on their activities, periodic tape recordings of their reading and a journal that goes home for parents to note their concerns.

Potter, a leader in the move to the new structure, said she realizes every day the old way was easier. But she would never go back.

"I can't be satisfied getting up in the morning and doing something one way when I know it could be better." ◀

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*New Suncook is actually an elementary school going through grade five. [ed.]

Maine School Refuses to Put Reform on Hold

New Ideas Thrive Despite Scarce Funds and Rural Isolation

by Lee Mitgang

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LOVELL, Me.—New Suncook School, nestled in a clearing off a pine-scented road in northwestern Maine, seems an idyllic setting for 270 young minds to grow.

But the elementary school's scenic solitude is both blessing and curse.

As schools across the country struggle to meet a decade-long push for reform, rural schools like New Suncook face the task with two major handicaps: isolation and scarce funds.

In this Maine village that survives on potato farming and summer tourism, teachers make $16,500 to $29,500 a year. Teachers like Rhonda Boyer routinely work unpaid extra hours each morning to be on hand to greet the first busloads of kids arriving at 6:30 a.m.

"I don't really mind coming early," said Boyer as she looked after about 50 children in the schoolyard. "I like talking to kids in a social way."

Staying in touch with the latest teaching methods means long weekly drives to universities located on the Maine coast.

Reform ideas could easily have passed by a school like New Suncook. But its principal, Gary MacDonald, was determined not to let that happen.

"There was a general sense here that with all the reform reports coming out, that if we wanted to be respected as professionals, we had to respond. We had to be on the cutting edge," he explained.

Urged on by MacDonald, teachers taught themselves the art of grantsmanship. The school received several Maine "innovative grants" to enhance ties with parents and the community.

Another state grant helped two teachers devise a highly innovative "MAGIC Class" (an acronym for Multi-Aged Grouping using Integrated

Curriculum) that mixes 90 kindergarteners, first graders and second graders in a single class. In that class, younger or less able students aren't labeled or isolated from their older or more capable peers; students mingle, and learn from each other.

At their own expense, MacDonald and several teachers flew to Seattle a couple years ago to hear the views of John Goodlad, a highly regarded reformer. Last summer, MacDonald and some teachers attended a National Education Association symposium in Minneapolis on school-based reform.

New Suncook even established a sister-school relationship with a rural California school. MacDonald met Karen Kawai, the principal of G. B. Miller Elementary School in La Palma, Calif., at the Minneapolis meeting, and the two hit it off.

"In February 1988, five of us went out there on our vacations to teach. People gave up their vacations and footed the plane bill.

"Four weeks later," MacDonald said, "four from G. B. Miller came East. It became known as the 'California Connection.' The kids were enthralled with the idea of learning about life in California, and vice versa."

Such efforts to dispel professional isolation have paid dividends.

Brenda Thibodeaux, a potato farmer whose 11-year-old son, Brian, is dyslexic, said a new teaching technique called semantic mapping has helped her son participate more actively in class discussions.

MacDonald encourages teachers to turn hardships—such as the noisy construction of a new school wing to accommodate kids from the burned school—into learning opportunities. Youngsters wrote about the daily construction ruckus, using it as a lesson theme. The school plans to publish a photo essay when the extension is complete.

MacDonald said that above all he tries to foster an atmosphere of creativity, sharing of ideas, and constant questioning.

Thus, for example, fourth-grade teacher Karen Johnson has the freedom to teach reading without dull texts.

"I do reading a little differently," she said. "I use trade books. I have kids heterogeneously grouped. It's not by ability. It's who wants to read this book?"

"Instead of trying to put limitations, I try to make opportunities," said MacDonald. "I trust the professionals." ◀

Thorncliffe's Crusading Principal

by Charles W. Magill

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In three short years, Lou Yaniw has transformed this Edmonton elementary school from a disaster area into a safe haven of learning.

It took no time at all for Louis B. Yaniw to discover how big his problems were as the new principal of West Edmonton's Thorncliffe Community School. The 1988–89 school year wasn't a week old when counsellor Ted Davis burst into his office with disturbing news. Annie, a Grade VI student, had started a reign of terror with the help of a gang from a nearby junior high school, and terrified children were already going into hiding. Davis had confronted Annie, but she cursed him and said she didn't have to obey him after school hours.

Yaniw began delving into Annie's history and found a grim record. She had extorted money from smaller children for "protection," had been involved in a theft ring and had a history of violence towards students and teachers.

Yaniw and the staff worked on Annie's behaviour at school, but outside she remained out of control. Her mother had responded with abuse to every approach Yaniw had made. He decided to involve the police and, with Const. Ian McKnight, showed up at Annie's home. There they had a lucky break. In the truck parked outside, McKnight spotted two rifles and ammunition. Threatened with charges for improper storage of a weapon, Annie's mother's boyfriend told her to send her troublesome child away.

This was the opportunity Yaniw needed to get Annie out of her damaging environment. He contacted Alberta Family and Social Services and arranged for her to be placed in a group home. Her behaviour there began to change. And when she returned, smiling, to Thorncliffe for a visit at the end of the school year, Yaniw allowed himself to think that perhaps she had turned the corner.

Yaniw, then 39, was under no illusions about the task facing him in Thorncliffe, an overcrowded, low-income housing district near the giant West Edmonton Mall. Family disputes, child-welfare problems and children in trouble with the law were common, and the students were venting their frustrations at school. Bullying was rampant; extortion, theft and vandalism frequent; fights in the playground a daily routine.

During one month of the year before Yaniw took over, students had been sent out of class 327 times for disruptive behaviour. A school survey showed that only 41 percent of students felt that misbehaviour was being dealt with properly; only 54 percent felt the rules were fair.

Pat Fizell, a consultant in behavioural management, recalls going into one class during a story-reading session and watching in horror as a boy climbed on a desk and somersaulted into the assembled children. "We were on a downward spiral," said Helen Mills, a Grade 1 teacher. "We had no pride in ourselves or the school."

There were other worrying signs. Parents talked about moving their children elsewhere. Supply teachers were avoiding the school. "All these little red flags were going up," recalls George Traynor, associate superintendent of Edmonton Public Schools, "saying we'd better address this problem before it gets worse."

Traynor and Superintendent Mike Strembitsky turned to Lou Yaniw, principal of Coronation School in northwest Edmonton and a trained psychologist used to dealing with disruptive children.

Ranting and Raving. Reverence for education and for the school as a force in the community was instilled in Lou Yaniw by his parents. Of Ukrainian farming stock, his mother and father both left school early to work on the farm and were determined that the three Yaniw boys would have a full education.

Yaniw's first goal was to be a school counsellor. He worked his way through the University of Alberta as a lifeguard, studying psychology and education, and married his sweetheart in his second year.

His first full-time job was with Edmonton's social services department, working with emotionally disturbed children. Eighteen months later he was asked to work with a group of 12 problem students at Spruce Avenue School.

Yaniw was the fourth teacher they had had in 11 months. They were tyrannizing the school, breaking into the caretaker's room and having water fights, climbing en masse on the roof of the gym. One of the students once dropped a teacher to her knees with a punch to the stomach. "All I can remember doing at first," says Yaniw, "is ranting and raving at these kids: 'Stop that. Put that down. Don't do that.'"

For the first few days, he kept the group after school. On the fourth day, returning to the room after phoning a parent, he found all but one of them gone and pools of urine around two potted plants. Yaniw took the culprits to the principal the next day for a strapping and learned that one boy had had the strap 14 times the previous year; another, nine times. "That told me that the strap just doesn't work," he says. "I have never used it since."

For Yaniw, discipline is achieved not by punishment but "by teaching children social behaviour, allowing them to talk about their emotions and looking at other choices they could have made: apologizing, for example, when they've done something wrong. As a principal I don't find it hard to apologize to a student, because it's a teachable moment when the child can grasp that even a teacher can make a mistake."

Yaniw spent five years at Spruce Avenue as a teacher and counsellor. After another five years of citywide consulting, he became acting principal of Coronation in 1985. There he began to develop many of the ideas that formed the "Yaniw plan" which would be used at Thorncliffe. He studied inner-city schools in Miami, Chicago, Harlem and Los Angeles. He was in demand as a speaker and leader of seminars on discipline and development of a positive school climate. "You really lit a fire under me," wrote one participant.

A New Look. Notified of his appointment to Thorncliffe in June 1988, Yaniw made 11 visits that month to get a sense of its character.

On the last day of school, he met the staff. The mood was tense. Change was coming to Thorncliffe, he said. He shared with them his vision of a school where students could reach their full potential in a secure environment. He was prepared to commit himself 100 percent, and he expected a one-year commitment from them. If, after that first year, any teachers wanted a transfer, he would help them get one.

The response from the staff, many of them frustrated and approaching burnout, was cool. One teacher looked Yaniw in the eye and said, "You'd better get yourself a good rest this summer, because you're sure going to need it!" *It's you who will need the rest,* Yaniw thought, *because things are going to change around here.*

But for Helen Mills, Yaniw's student-centred philosophy struck the right note. "There have to be changes here," the Grade I teacher told him, "for the sake of the children. If you can help us, then we are going places."

That summer Yaniw plunged into his task. He recruited Ted Davis, acting assistant principal at Aldergrove School. With his help, Yaniw reviewed staff assignments, budgets and schedules, and remapped the playground to permit tighter supervision.

"I remember the first time I walked into the school," says Davis. "It was a mess—old, dusty banners, pictures of staff who hadn't been there in years, boards tacked up with torn tape."

A more serious problem was the school's open-plan layout. For years teachers and children had complained about the noise and disruption as activity spilled from one class to another. But there was no money available for renovations. With close to 90 percent of his budget committed to salaries, Yaniw cut the teaching staff by one, freeing almost $50,000 a year.

When the school reopened in September, it had a new look. Walls were brightly coloured and decorated with artwork. The school's new motto—"Thorncliffe is a Student-Centred School"—was inscribed in the entrance.

Four classrooms were already enclosed. One of the older students told Yaniw in amazement: "Now people don't look at us all the time and don't just walk into our class. And we can concentrate."

Yaniw's approach to the students was dramatic. On the first day of school, he marched into classroom after classroom, held up the black rubber strap that had symbolized the school's approach to discipline and ceremoniously dumped it in the wastebasket. "We believe in helping you, not hurting you," he told every class to spontaneous cheers.

Awards for Performance. Yaniw and Associate Superintendent Traynor realized that before higher academic performance could be expected, discipline, staff motivation and the school atmosphere had to improve. Instead of being sent to the principal's office for wrongdoing, students were referred for doing something right. In the student's presence, Yaniw would call the student's home, pass on the good news and allow the student to talk to his parents. He has yet to encounter a parent who is not elated at receiving such a call.

To provide recognition for classroom performance, Yaniw awarded monthly Diamond of Distinction certificates to students who did their best, with bronze, silver and gold crests for those who earned more than six during the year. One who responded well was Margaret, known for her aggressive behaviour in class and on the playground. She papered her bedroom wall with her certificates, a mark of growing self-esteem.

Each teacher is encouraged to give out good-conduct tickets, which go into a draw held before the entire school. The winning student selects a lunch spot for himself and his teacher. McDonald's and Pizza Hut are favourites, but when one pupil picked the Fantasyland Hotel in the West Edmonton Mall, Yaniw honoured the choice.

From the outset, a major focus has been on discipline. A 28-page "Positive Behaviour Plan," distributed to parents, sets out school expectations, various disciplinary actions, behaviour report forms and student-action plans to remedy problems. Student, teacher, principal—and sometimes a parent—must sign.

For a sixth grader who was extorting money from another child in return for being a bodyguard, this meant apologizing to his victim and reviewing with his parents how he could earn some pocket money and learn financial responsibility.

Yaniw tackled the bullying problem head-on, identifying offenders by cross-referencing teacher observations with a student survey. Playground supervision was doubled, and students were encouraged to report bullying—knowing that culprits would be dealt with fairly.

In place of the strap, Yaniw instituted recess detentions, with time off for good conduct, and created "time-out" rooms where children could sit quietly or discuss ways of correcting their behaviour with a teacher.

For the staff, Yaniw introduced training in classroom management, crisis prevention and handling parental conflict. He insisted teachers resolve incidents the day they occurred, helping the student to see what had gone wrong, and to think about consequences and ways to prevent it happening again.

At a typical detention session, Yaniw showed Ronald, a fifth grader prone to lashing out when frustrated at teachers or fellow students, how he appeared to others and how he might change. Ronald went on to become a model student and a gym-equipment manager during the two years he was at Thorncliffe.

Island of Security. Soon the school as a whole started to reflect the turnaround. Within 16 months of Yaniw's arrival, dismissals from class dropped from 300 to 22 a month; only 69 percent liked being in school three years ago, 94 percent do today.

Surveys of parents show similar results, and no less than 90 act as volunteers. The parents' advisory committee raises $15,000 a year to buy books and computers. It also supports field trips, which, along with sports, have become an integral part of the Thorncliffe experience. Soccer and floor hockey involve all grades. School clubs flourish—for archery and art, library and life sciences.

The school itself is transformed. All classrooms are enclosed now. The entrance is bright and welcoming. Colourful banners and photos of student achievers adorn the walls. Upbeat notice boards—the Wall of Fame, the Weekly Talent Review, Positively Good News—reinforce the student's sense of achievement. Teacher turnover is negligible.

When he arrived at Thorncliffe, Lou Yaniw was facing a harrowing personal crisis: The younger of his two children, Jonathan, was fighting a degenerative neurological disease. Yaniw, his wife and mother maintained a 24-hour vigil. Over a two-year period, Yaniw spent close to 200 nights in hospital with Jonathan and then headed straight for school.

Jonathan died at home in September 1990, aged six. At the funeral, eulogist Ron Spence, a colleague at Spruce Avenue, told the grieving Yaniw that all around him were moved by "the ceaseless care and discipline it takes to be with your son through hundreds of hours, while facing the pressures and demands of a new school."

"Lou is a true role model," says school trustee Rose Rosenberger. "He consistently demonstrates the behaviour and the actions he wants others to have."

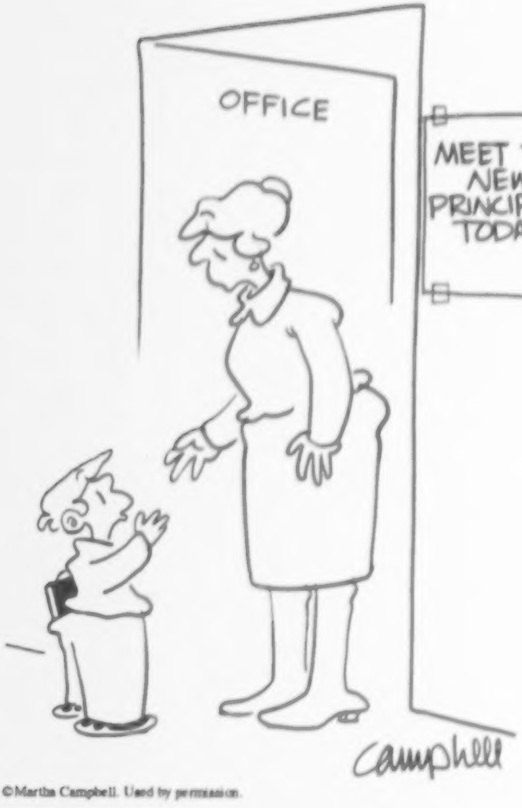
Adds Traynor: "Lou Yaniw has built a school where it is safe to learn and work, where you sense consideration for others, and you feel welcome. These things don't happen overnight, but somehow they have been instilled."

And the children respond. For if he receives one hug a day, he must receive a dozen. In the corridors students greet him warmly, exchanging family news or giving him a bouquet of tattered dandelions.

There is no compliment Yaniw values more, however, than the one from Margaret, that once-aggressive child who papered her bedroom wall with achievement certificates. "I'm moving away," she told him, bursting into tears. "I'll miss you so much, Mr. Yaniw."

For Margaret, as for all his students, Lou Yaniw has come to represent an island of security and love in an otherwise uncertain world. ◀

School Improvement


OFFICE
MEET THE NEW PRINCIPAL TODAY.
Campbell

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"Hello, I'm Billy Bernard—part of the mess you inherited from the previous administration."

Effective Schools: Why They Rarely Exist for At-Risk Elementary-School and Adolescent Students

by James P. Comer, M.D., M.P.H.

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Introduction

When our Yale Child Study Center School Development Program staff began work in an elementary school in New Haven several years ago, the principal gave us what was intended to be a helpful warning. He pointed out that we should not expect to have the same success in his school as we had had in our initial project schools, Martin Luther King, Jr., and Katherine Brennan. He said, "The people in the King School area are poor, but they live in single-family homes." I pointed out that Katherine Brennan served a housing project and that the children had shown similar academic and social performance improvement. He countered, "Yes, but those are two-story project buildings; the children in our school are from a high-rise housing project."

A teacher in the same building said to me, "We can't expect grade-level work from these children because they have to put up with too much at home.

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For some it's quite an achievement just to be able to get to school." With this level of understanding and expectation, it is not surprising that the students, school staff, and parents were all underachieving. And these were well-meaning people…friends.

The principal and the teacher were white, but they were not hard-line racists. They had adequate administrative and teaching skills. They were caring people who wanted to do the best they could for the students. And to their credit, once the school improvement model was in place, they were both enthusiastic contributors to the school's subsequent dramatic success. The situation was similar for most of the staff.

A year later the principal gave a glowing report on the social and academic progress being made at the school. He described how staff members who had appeared "burned out" had been reenergized through participating in building-level, or school-level, planning and activities, particularly those designed to improve the social climate of the school. As an example he cited the good feeling after a staff event in which the male teachers prepared breakfast for the women teachers. As an afterthought he said, "And can you believe that there were no behavior problems among the students in the school that day?"

I could believe. There was no reported crime in Washington, D.C., on the day of the March on Washington, August 28, 1963, during the height of the intensified civil rights movement—and for many of the same reasons: pride and hope born of the generated ethos of the moment. When the major forces in a social system are mobilized in support of constructive activities, undesirable behaviors are minimized.

While this principle of human behavior is generally accepted, it is rarely applied to our understanding and implementation of school programs. But it is at the heart of the problem of less-than-effective schools for at-risk students. The failure to understand and to respond to the school as a modifiable social system—with academic learning as a function of the quality of relationships in the system—is more the problem of social and behavioral scientists, and of the culture, than of educators. The dominant viewpoint in our culture is that behavior is determined almost totally by an individual, without the significant influence—past, present, and future—of political, economic, and social policies and practices at every level. We have paid little attention to the complex way in which social policies and practices affect communities, schools, families, and, in turn, students' personal development and learning. Yet the understanding, attitudes, and behavior of the teacher and principal above were obviously influenced by research, training, and media information; by political, economic, and social policies and practices—past, present, and future; and by staff, family, and student responses to the teacher and principal.

In the absence of needed understanding, academic learning is too often thought of as a mechanical process that can be turned on and off at will by the student. And teaching is thought of as a mechanical process: as a transaction only incidentally involving relationships rather than primarily as a relationship that promotes and facilitates a desirable level of academic learning. This attitude is reflected in most of the education-reform reports up until now. The emphasis on raising teacher and student standards is simply a call for an increased amount of the same thing schools were already doing that did not work for many students. This "understanding" of and approach to the problem increase the risk of academic and life failure for students already at risk.

Academic learning is facilitated by overall growth and development—social-interactive; psychological-emotional-affective; moral; speech and language; and intellectual-cognitive-academic. Children who do not receive experiences that promote adequate overall development are at risk of failing in school and, in turn, failing in life. Schools that are unable to help children overcome their underdevelopment, or development that is adequate outside of school but not adequate to accomplish the academic task, simply maintain or increase the risk of academic and life difficulties for these children.

To overcome prior developmental limitations among students, adults who teach must have caretaking or child-rearing skills. And the climate of relationships in a school must be at a level that permits their use and effectiveness. All adults involved with young people are more or less child-rearers. Yet little or no attention is given to the selecting of teachers with these skills or to providing practice in such skills during their preservice and inservice training. Even less attention is given to helping them learn to create a building-level social system and an ethos that promote constructive interactions, teaching, and learning. These circumstances hurt the at-risk student the most.

In this paper I will first discuss the ways in which political, economic, and social conditions—past, present, and future—impact communities, families, and school teaching and learning. I will then explore the relationship between overall development and academic learning. Next, I will discuss the black experience, illustrating the ways in which troublesome political, economic, and social policies and practices—past and present—eventually created and continue to create a disproportionate number of at-risk students among blacks. I will then consider the essential conditions needed to create effective schools for at-risk students and the obstacles to creating them. I will close with a discussion of the implications of my paper for chief state school officers.

Education, Society, and Behavior

Thomas Jefferson and others argued that a system of public education was essential to the success of a democratic society (Padover, 1946). It was believed that in a society with a broad base of educated persons, it would be difficult for a small group of powerful individuals to serve their own interests at the expense of the great majority. It was also believed that public education was the only way to advance the arts and sciences and to promote civil and responsible behavior among enough people so as to ensure desirable societal functioning and stability. These beliefs led to the rationalization of federal government support for public education under the general welfare clause of the United States Constitution (Morris, 1980).

However, because we had an agricultural and highly industrial society until the 1960s, most heads of households were able to meet adult responsibilities—earn a living, take care of themselves and their families, experience a sense of well-being because they were able to do so, and function as responsible community members and citizens—without a formal education. As a result, the power and impact of education on societal functioning and individual behavior was not fully tested.

After World War II education became the ticket of admission to living-wage jobs and, in turn, the mechanism through which individuals met adult expectations and experienced a sense of well-being. Obtaining an education, as well as meeting adult work expectations, required a higher level of overall development than was necessary prior to that time. Indeed, the level of development necessary to meet everyday adult tasks and responsibilities was the highest ever required in the history of the world. This change occurred because of the rapid application of scientific and technological knowledge to every aspect of life, particularly after 1945. We moved from a horse-and-buggy level of technology in the early 1900s—not far removed from that of the wheel—through an age of automobiles and airplanes in the 1940s, to a jet-plane, rocket-age level of technology, all within the lifetime of today's senior citizens.

Scientific and technological change profoundly affected the nature of community life, creating new and challenging social problems. Many of our major social problems—including students at risk for poor academic learning—are due to our inability to adjust our institutions, particularly public schools, to the level and speed of social change. And yet the mission of schools remains the same—to create a broad base of people educated at a level and in a way needed to maintain a vital democratic society.

Prior to 1900 and indeed up until World War II, we were a nation of small towns and rural areas, and even the cities were collections of small towns. Heads of households often walked or rode short distances to work, except in rural areas. Teachers sometimes walked to school along with their students. Play or recreation was often local and communal—church or club picnics, dinners, dances, and the like. Teachers often attended the same churches as the parents of their students. Thus parents, teachers, administrators, and religious, economic, and political persons often interacted with each other in incidental ways.

With this kind of day-to-day interaction of authority figures, there was a fair amount of trust among them, and expectations and outcomes for desirable and undesirable behavior were clear and predictable. Adults and young people had a sense of place—even when it did not afford them a high level of status. And there was an overall sense of community.

Communication media were limited in impact right up until the 1940s. Because transportation was slow and often difficult, there were fewer people and ideas from outside neighborhoods or communities. Thus parents, teachers, administrators, ministers, policemen, and others were the "source of all truth" for children. During the critical early developmental years, almost all of what children learned about the world came to them from emotionally important authority figures. And the adults censored and presented the world to the young as they wanted them to understand it and respond to it. Because there was a reasonable consensus about what was right, wrong, good, and bad, these important authority figures often appeared to speak with a "common tongue." Under such conditions the school was a highly respected and natural part of a community. There was an automatic transfer of authority from parents to school staff. And with the frequent interaction and sense of agreement among authority figures, it was difficult for students to act in troublesome ways. Parents, school staff, neighbors, church members, and the like all supported desirable social development among young people. Thus difficult school behavior was not as common.

Nonetheless, the schools always failed to interest a large number of the students in the academic program. And for this reason and others, as late as 1940, 76 percent of all students left school prior to graduation (Snyder, 1987). Many of those who left had not had the kind of preschool experience and level of overall development that would allow them to find satisfaction in academic learning. But again, there was no problem. They could leave school, find work, meet all their adult responsibilities, and experience the related social and psychological benefits—the well-being needed for the kind of general welfare our social system requires.

After World War II we became a nation of metropolitan areas—with high mobility, rapid visual communication (television), and now telecommunication systems. Heads of households began to travel long distances to work. It was less common for teachers to live in the same neighborhoods and walk to school with their students. Parents, teachers, and administrators interacted with each other in an incidental or communal fashion less often than before. These changes and others reduced the sense of trust, place, and community that had previously existed in a natural way.

Television presented families with attitudes, values, and ways from around the corner and around the world. And the information went directly to young people without the censorship of meaningful adults. Some of the information children now receive is in conflict with the attitudes, values, and ways of their parents. Children can observe differences of opinion about what is right and wrong, good and bad, with every newscast and debate. Television dramas present violence and sexuality on an explicit level that was uncommon in the past.

The world of today, then, is infinitely more complex than the world of yesterday. And yet, young people are no more mature today at five, 12, or 18 than they were in the past. Again, to manage in the complex society of today, young people need the highest level of overall development ever required in the history of the world. They need sustained and skilled parental help to acquire such a level of development, as well as sensitive and supportive institutions, particularly the school. Yet, for many reasons, they in fact have less help and support for overall growth and development now than in the past.

Today both parents in a family often work. There is more divorce and more single-parent childrearing. Families under social and economic stress often lack or are unable to apply the childrearing skills necessary to help their children develop abilities necessary for functioning well in schools. The school is no longer a natural part of the community, and there is not an automatic transfer of authority from home to school. And where the staff and the community being served are different in significant ways—class, education, race, religion—there is the potential for conflict between home and school. Alienation and distrust reduce the ability of parents and staff to work together to support the development of students. A first-grade teacher in New Haven told me that she explained the expectations of her classroom to the students on the first day of school and a six-year-old raised his hand and said, "Teacher, my momma said I don't have to do anything you say."

Most schools have not adjusted their organization and management in a way that promotes better home-school relationships and, in turn, supports student development. Schools are still basically hierarchical in organization and authoritarian in management and style. There is top-down rather than collaborative management. Staff, parents, and students usually feel that they cannot contribute to or influence the program of the school, whether it meets their needs or not. Inflexible organization and management make it extremely difficult for the staff to take advantage of spontaneous and building-level-planned opportunities for teaching and learning. And, again, because learning and desirable behavior are understood as mechanical and willful acts rather than as a consequence of good overall development, school personnel are not trained to support child development.

Education and Child Development

Children are born totally dependent, with only biological potential, aggressive energy, and the capacity for establishing relationships. Without support from mature caretakers, the biological potential will not be developed; indeed, children will die. Aggressive or survival energy must be channeled into learning, work, and play, or it can be destructive or troublesome to the child and people around him or her. The purpose of education is to move children from their dependent state to a level of development in which they can successfully meet their adult tasks, including citizenship responsibilities.

Motivation and preparation for academic learning occur largely though the channeling of survival or aggressive energy into intellectual curiosity and self-expression. Improperly and inadequately channeled aggressive energy is responsible for most of the behavior problems we are concerned about among young people in school.

As parents provide food, warmth, security, and intellectual stimulation for the child, an emotional bond develops between the caretaker and the child. This permits the child to imitate, identify with, and internalize the attitudes, values, and ways of parents. The caretaker is then able to provide the child with experiences of ever-increasing complexity that lead to development along a number of pathways. There are many pathways along which development takes place simultaneously. Several are critical for academic learning: social-interactive, psychological-emotional-affective, moral, speech and language, intellectual-cognitive-academic.

The parent or caretaker who intervenes when a two-year-old attempts to take a ball away from another child promotes development along these critical pathways. He or she explains that Johnny cannot hit or violate Bobby but must either wait until he is through playing with the ball, work out an arrangement in which they can play together, or just go and do something else. In intervening and spelling out the options, the caretaker provides the child with the rules of the social-interactive game. This gives the child the motivation to control the impulse to hit or take and soothes any hurt feelings, thus supporting psycho-emotional development; and it presents what is right and wrong, thus providing moral training. Speech and language are involved as thinking, or intellectual-cognitive learning.

On a recent five-hour plane trip I observed a father teaching cognitive skills to his preschool-age daughter. "What is the opposite of *up*?... What do you usually think of as going together with a fork?... Why don't you finish this story for me?" Even when he limited her behavior, he taught. "If you stand up in your seat while the movie is on, what happens to the people behind you?" At one point the daughter said jokingly, "I'm so silly, I am dumb." Protecting her self-image, in a calm and good-humored fashion the father said, "Oh, you're not dumb. I'll bet you're one of the smartest girls in your nursery-school class." And sensitive to her energy level, just when I thought to myself that that was enough teaching for today, he encouraged his daughter to take a nap.

Most better-educated parents read to their children. The child has the adult to himself or herself in what is otherwise a busy day; hence, reading time is a positively charged period. Children's stories meet many of their psycho-emotional needs, and thus they want to hear them again and again. Eventually they associate the words with the pictures on the page and they begin to read from memory. Parents are delighted and excited, and the child enjoys the approval that comes with achievement. This reinforces the child's desire for mastery in reading and in managing other aspects of the environment. The child notices that the parent reads from the top down, from left to right, and exclaims in certain ways. These are prereading skills, and children who have such experiences usually go to school already reading or prepared to learn to read.

An eight-year-old asked his father what he would give him if he made all A's in school. The father said, "Wait a minute. You're not going to school for me. You're going to school for yourself. If you do not do well in school, your teachers won't hold me responsible; they will hold you responsible... and the same goes for your classmates. You will have to hold yourself responsible, not me." Good childrearing helps the child develop inner control, direction, motivation, and acceptance of responsibility for his or her own behavior and academic growth.

Children who receive such experiences at home generally present themselves to teachers and others in ways that bring them positive feedback, increasing their confidence and self-esteem. As a result, positive emotional attachment and bonding, similar to but less intense than that which takes place with parents, develops between school staff and students who are functioning well. This permits the students to imitate, identify with, and internalize the attitudes, values, and ways of the staff, including desirable social behavior and learning. Because early school learning has limited immediate utility, it is important that the relationship between teacher and student enable the teacher to serve as a valued role model and guide.

Children who have not had desirable and necessary preschool experiences are often underdeveloped along the pathways necessary for school success. Teachers not trained in child development often view their behavior as "bad" or consider indications of limited academic learning potential as "dumb." In our culture we punish bad people, and we have low expectations for people with apparently limited intelligence. Healthy, aggressive, reactive children often respond to such attitudes and behaviors in provocative ways, only making their situation worse. Teachers feel alternately angry and guilty, frustrated and disappointed, and they respond even more inappropriately. This eventually leads to a downhill academic course for the student, emotional burnout for the teacher who has large numbers of such students, and poor relationships in the school and between home and school. Students in such situations are at risk for academic failure. A disproportionate number of such students are black, Hispanic, and Native American. I will discuss the black American experience since it has been the area of my research.

Education and the Black Experience

Understanding of the black experience is generally limited by implicit and explicit assumptions that, aside from slavery, it has been essentially the same as that of all other groups. It has been different in critical ways. It is important to understand the ways in which the black experience has been different, and the consequences of those differences, in order to develop effective strategies for overcoming obstacles to the development and full academic achievement of black youth.

Most American immigrants were able to maintain cultural continuity (Hansen, 1940). Most continued to use their same language and practice their same religion in the new country until opportunity and assimilation were possible. Many came from the same place in the old country and settled in significant numbers in the same place in the new country. This created homogeneous cultural enclaves in which there was a fair degree of social cohesion. In addition, they were able to vote almost immediately; thus various ethnic groups could gain political, economic, and social power in one generation. Such power permitted the groups to experience a wide spectrum of opportunities in the mainstream of the society. As a result, group members gained knowledge, skills, and contacts in every sphere of community life, increasing opportunity for the next generation. This permitted a three-generation family and group developmental cycle that paralleled economic development in this country.

Before 1900 it was possible for adult heads of households to be uneducated and unskilled and yet provide for themselves and their families in what was largely an agricultural and eventually, an early-industrial society. This situation made it possible for heads of households to meet their responsibilities without education, promoting the level of family and community stability necessary for children to gain the moderate academic and social skills needed for success in the job market of the heavy-industrial age, 1900–1945. Well-functioning families during this period had the best chance of giving their children the academic and social skills necessary to gain the high level of education and the social behaviors necessary for success in the job market of the late industrial age, 1945–1980, and the postindustrial age, 1981 to the present. These conditions permitted immigrant groups to experience a sense of independence and opportunity and a sense of individual and group control of their destiny.

The black experience has been marked by cultural discontinuity, forced dependency, a limited sense of opportunity for an improved individual and group situation, and a limited sense of control.

West African societies, the origin of most black Americans, were organized through tightknit kinship groups in which the giving of direction, the provision of security, and the management of government, economic, religious, and other institutions were all integrated (Gibbs, 1965). Slavery destroyed these institutions along with language and other cultural forces that might have provided social cohesion. The provision of food, clothing, and shelter, and even sexual and social expression, were either controlled or supervised by the master. And no matter how hard or well the slave worked, it was for the benefit of the master and not for the glory of the tribe or tribal group, or to improve the condition of the slave or slave family (Elkins, 1963).

Slavery produced a range of behaviors from acting up and acting out to passive aggression to dependency, apathy, and depression. This led to harmful habits and conditions, such as working as slowly as possible, not planning for a future, and taking out anger and resentment at the master and the slave system on other slaves. Many of these troublesome attitudes and behaviors were transmitted from generation to generation, doing significant psychological and social damage (Comer, 1972). Some slaves were less traumatized through identification with the master and through religion, or the black church.

Identification with the master, or the aggressor, meant a sense of adequacy as a slave on the master's terms. However, the master still regarded the slave as an inferior person, so that this identification created group divisions and problems with self-identity. Religion permitted the slave to experience a sense of adequacy on "God's terms" rather than those of the master (Frazier, 1962). Religion thus provided slaves with a belief system that could become the motivation and basis of support for a constructive family and community life style. Religion and the black church provided the black community with the conditions that led to the first nucleus of educated people. It was the black church that provided the impetus for the intensification of the civil rights movement.

Opportunities in the mainstream of the society after slavery could have reduced many of the troublesome behavior problems created by the institution. But terror, violence, and subterfuge were used to illegally deny blacks the vote. Institutions that should have protected black rights and thereby created a sense of belonging and well-being often cooperated with the lawbreakers (Berry and Blassingame, 1982). Without the vote in the area in which most blacks were located, the group could not gain political, economic, or social power. It was denied knowledge, skills, and contacts within the political, economic, and social mainstream. Group cohesion and power grew only out of the black church, and it came under attack if it addressed political, economic, and social issues.

Because the black community had little power, it was possible not to provide adequate educational opportunities to the group. As late as the 1930s, four to eight times as much money per person was spent on the education of a white child as a black child (Blose and Caliver, 1936). Where blacks were disproportionate in number, the disparity was as much as 25 times. As late as the mid-1960s two prestigious white women's colleges together had an endowment that was one-half the endowment of Harvard. That one-half endowment of Harvard was more than the combined endowment of all the 100-plus black colleges in the United States (Council for Financial Aid to Education, 1967). This is evidence that blacks were massively undereducated during the middle- or heavy-industrial era when most Americans were preparing for the late and postindustrial periods.

Despite these conditions most black families functioned reasonably well into the 1950s. Although blacks worked at the bottom of the economic barrel—as sharecroppers, tenant farmers, laborers, domestics—this menial labor was enough to provide basic needs. Rural and almost communal life styles permitted many communities to support desirable family functioning. And the attitudes, values, and ways of the black church culture sustained individuals and the group against social injustice and hardship. As a result, almost 80 percent of all black families had two parents as late as 1950 (U.S. Bureau of the Census, 1960). And most black communities were reasonably safe until that time.

When education became the ticket of admission to living-wage jobs after World War II, the black community began to experience increased difficulty. Undereducated in prior years, blacks were the first to experience exclusion because of raised educational standards. And because blacks lacked political, economic, and social power, a high level of racism persisted in the society. Thus even well-educated blacks were denied adequate jobs and other economic opportunities.

Higher education for blacks was in the professional service areas and was designed to support a racially segregated social system, not to allow blacks to participate in all areas of the society. As a result, the black middle class is largely a professional group and did not enter the mainstream political and economic arenas in significant numbers until very late. In addition, the south-to-north movement tore many people away from the nurturant roots of the rural black church culture and left them excluded from the mainstream of the society in the urban North. As a result of all these conditions, many families that once functioned well began to function less well after the 1950s; and many blacks were denied the opportunity to undergo the three generations of development possible for other groups.

By the time the civil rights movement opened up opportunities for blacks in the 1960s, we were already into the middle of the last stage of the industrial era. And for the previous 20 to 30 years, the best-functioning black families, like most well-functioning families, had reduced their size in response to conditions in the industrial age. But many families that functioned less well continued to have a large number of children. It is for all these reasons that black families appear to be going in opposite directions: better-functioning families have more opportunities than ever before, and by every social indicator, families that function less well are under greater stress and in more difficulty than ever before.

It is for all these reasons that a disproportionate number of social casualties in the society are black. A disproportionate number of black children do not receive the experiences that will enable them to do well in school and to have a reasonable chance to do well in life.

Implications for Public Policy

From an Intervention Model

Our Yale Child Study Center School Development Program was designed as a building-level attack on the barriers to appropriately serving at-risk students. It was based on our understanding of societal change, the lag in institutional adjustment, the black experience, and developmental and relationship issues (Comer, 1980). Our four-person team from the Child Study Center—psychiatrist, social worker, psychologist, special-education teacher—began a collaborative program with the New Haven School System in two elementary schools in 1968. The two schools were 99 percent black and almost all of the students were poor.

In 1969 they ranked 32nd and 33rd out of 33 schools in language arts and mathematics on standardized achievement tests. The students were 18 and 19 months behind in language arts and mathematics by the fourth grade. School attendance was among the worst in the city, and there were severe behavior problems in both schools. Staff morale was low and parents were angry with and alienated from both schools. One school was eventually closed and replaced by a similar elementary school serving a housing project. In 1984 the original project school was tied for third and the replacement school was tied for fourth in achievement in language arts and mathematics on standardized achievement tests out of 26 schools. The students were a year above grade level in one school and seven months above in the other by the fourth grade. There had been no change in the socioeconomic makeup of either community.

We recognized that the parents were under social and economic stress for the reasons described above and that as a result a disproportionate number were not able to provide their children with the experiences necessary to perform well in school. Because of societal change, the community no longer aided the development of children in a natural way, and the level of development needed for success in school was higher than ever before. There was a need for the school to work with parents to support the student development needed for acceptable academic learning. But the staff was not trained nor was the school organized and functioning in a way to make this possible. In addition, income, education, race, and class differences created tensions and often anger and alienation between home and school. These factors contributed to difficult interactions among parents, staff, and students.

We knew that we could not mandate the needed changes. We concluded that we would have to develop a process that would change the ecology of or interactions within the school in a way that would facilitate student development and academic learning. Thus our focus was on the social system more than on any particular individual or group in the school enterprise.

We created a school governance and management team that was led by the principal but was representative of all of the adults in the building. It included teachers selected by teachers, parents selected by parents, and a member of the mental-health team (made up of the support staff—social worker, psychologist, and special-education teacher). This group developed a comprehensive building plan focused on the school social climate and the academic program. Staff development activities were based on building-level goals and strategies. The mental-health team worked in a preventive way as well as in the traditional way, providing help to the individual child, group, or family. The parent group supported the program of the school as designed by the governance and management team, giving particular support to the social program.

The school governance and management group coordinated all of the plans, activities, and people in a way that reduced duplication, confusion, and difficult interaction. It identified problems and opportunities, developed intervention programs or delegated responsibility for developing them to other groups in the school, assessed the interventions, and modified them on the basis of the findings. All of this was done with a sensitivity to child-development and relationship issues that was provided to the group by the mental-health team representative.

Certain rules and philosophies guided our work. First, we took a "no-fault" approach…not blaming the students, their parents, teachers, administrators, or anybody else. Second, it was understood that members of the governance and management team could not paralyze the principal. On the other hand, the principal could not use the group as a "rubber stamp." Decisions were made by consensus so as to avoid "winners and losers." We looked for ways to address problems within ourselves and in the building before turning to the central office and other outside help.

This approach systematically restored the desirable climate and relationships between home and school that existed in a natural way in the pre-1940s communities. It empowered parents, teachers, administrators, and students through collaborative, coordinated planning and program implementation. It gave everybody involved a sense of ownership in the school and a stake in the outcome, thus motivating desirable behavior.

Teaching was based on an understanding of what the children had not received in preschool experiences and was reinforced through relevant and meaningful activities. At the same time, the emphasis was on teaching basic skills. The involvement of parents in planning and implementation helped to make the program culturally sensitive and to make parents and staff accountable to one another. The work of the mental-health or support team helped all involved utilize child-development and relationship principles in every aspect of the school program.

Eventually a program called "The Social Skills Curriculum for Inner-City Children" was designed. It systematically provided low-income black children with the experiences that many middle-income children gain simply by growing up with their parents. The teaching of basic skills, social skills, and appreciation for the arts was carried out in this program through four units—politics and government, business and economics, health and nutrition, and spiritual and leisure time. This approach promoted social development among the students, which led to improved academic performance and set in motion a circular and reciprocal action that gradually improved the quality of living and learning in the schools.

A follow-up study on 24 students from our project and 24 students from the same community who did not attend our project schools, conducted three years later and in the same middle school, showed our project students to be two years ahead in language arts and a year ahead in mathematics. Students from our project schools were more often leaders and had fewer behavior problems. Similar results using our model have now been demonstrated in more than 20 elementary schools.

For Public Policymakers

Public policymakers, particularly chief state school officers, can help at-risk elementary and adolescent students by effecting changes in policy and practices in several areas. I will address education and training; standards for teachers, students, and working conditions; counseling and selection of teachers and administrators; and inservice support.

Education and/or Training

Preservice education and training should provide teachers and administrators with an appreciation of the purposes of education within the context of the liberal arts courses needed for the future teacher to be culturally literate. Such a curriculum should include instruction in economic and social history and in the appreciation of the multicultural nature of our society. Certainly, courses in traditional teaching methods are needed. But equal attention should be given to providing teachers and administrators with the kind of understanding and skills needed to create a school climate that supports overall student development, desirable behavior, and academic learning. All teachers and administrators need to be well grounded in child-development and behavior theory and knowledge. Prior to graduation, they should have to demonstrate the ability to apply such knowledge through supervised work with students.

Future teachers should be taught the basic principles of school organization and management. They should have an opportunity to learn realistic alternatives to negative discipline such as scolding, punishment, and exclusion. Teachers should be prepared to work with parents, administrators, and the community in collaborative ways; and the preservice program should enable teachers, administrators, and service personnel such as mental-health teams to collaborate prior to the time they are expected to do so in difficult inservice situations.

During the student (or practice) teaching, the student teachers should have an opportunity to observe highly competent and successful teachers organize and manage classrooms and teach subject-area material, as is the case in many traditional programs. In addition, attention should be given to having future teachers observe such teachers facilitate the social, psychological, and emotional development of students. This should include academic, social, and psychological evaluation of students, self or other staff, school or community problems, and structures and events interfering with or facilitating learning. The experience should enable the future teacher to observe the teacher working with the administration, support staff, and parents on matters of school governance and management. The student teacher also should have an opportunity to do all these things, under supervision, himself or herself.

Standards

I have no quarrel with the need for high standards for staff or students, but we must be careful not to base our decisions about standards on examples from foreign cultures, in which different student populations and sociocultural conditions exist. The recommendations for the reform of American schools recently made by several groups are probably appropriate for our top college-bound students but do not address the underdevelopment and the different needs of most of our students. It will be harmful to continue to suggest that most of our students are not meeting "the standards" when a set of standards geared to their needs has not been developed. When such standards are developed, they must not limit opportunity for any group of students, but must allow them to compensate for their underdevelopment and move to the level of their ability.

Inadequate attention has been given to standards relative to the working conditions of school staffs, to decisions made by school boards and/or school finance committees, and to teacher-support arrangements. The salaries of many teachers and administrators remain too low, and many work in less than reasonable physical plant conditions, with too few supplies and materials. Too many policy decisions relative to education are made by persons with little knowledge about children, learning, school organization, and management. Sometimes political patronage, personnel organizations, and/or union interests and needs are given higher priority than student needs. A set of standards for behavior, performance, and conditions in all these areas would be helpful.

Counseling and Selection

Because motivation for academic learning grows largely out of the relationships children—especially young children—have with meaningful, positive adults, it is important to select teachers and administrators for their ability to work well with children. There is much to suggest that the greater emphasis on curriculum content than on relationships in middle and secondary schools is a major contributor to behavior problems, including an inadequate investment in learning, among many middle- and high-school students. A major complaint of dropouts and poorly performing students is that "they don't care."

Most teachers do care. But teaching is a difficult task. It requires a particular temperament and good interaction skills. It requires analytical and creative thinking—most useful in independent, individual actions—as well as the capacity for collaboration, cooperation, patience, and tolerance. These combined traits—sometimes conflicting—are not widely found in the general population and are not easily developed. When people enter the field of education and lack the suitable traits but are forced to remain for financial and other reasons, everybody involved is harmed, particularly at-risk students most in need of highly-motivated, effective teachers and administrators. Thus some system of preservice and inservice counseling and selection for needed traits is as much indicated as selection for academic achievement. Persons "counseled out" of education are often relieved and more successful elsewhere. Even with a growing shortage of teachers, policies promoting selection and counseling could be useful and, in the long run, beneficial to all.

Support Services

As the teaching task became more complex after the 1940s, the role of support disciplines—psychology, social work, special education, counseling, nursing, and others—increased. But too little has been done to modify the training in these areas from their parent disciplines, particularly psychology, nursing, and social work, in order to permit their full integration and appropriate use in schools. Thus the one-to-one treatment approach used in medicine after problems arise is still the one most utilized in schools. But the application of child development, behavioral science, and health knowledge to all aspects of a school program is equally, if not more, useful. Teachers and administrators will be better able to use support services in this way if they have an opportunity to work with support personnel while all are in preservice training.

Also, it is my impression that schools and school systems serving the highest number of at-risk students do not adequately use available inservice time. Inservice is often planned from the central office and is not based on building-level goals and strategies. Studies show that even when such inservice is well done and exciting, knowledge gained is not integrated into practice and maintained as relevant to building-level goals and strategies.

Another important area of support is the coaching of teachers and administrators, particularly of inexperienced personnel. Because coaching is associated with the practice of supervision for evaluation purposes, it is being resisted and underused as a support mechanism. The same is true of the school program audit similar to that used for accreditation. Yet these approaches are used regularly and effectively in industry. They are a way to simultaneously promote accountability and assist individuals and programs in need of help, as well as maintain excellence. The *careful* introduction of these approaches—training, program development, attitudinal change—could make such practices acceptable and useful.

Summary

Effective schools rarely exist for at-risk elementary-school and adolescent students because rapid societal changes have reduced the supports available for the preschool development of many students. Simultaneously, other changes have increased the level of development needed for success in school and in life. Institutions, particularly schools, have not made the kind of adjustments needed to help at-risk students reach the level of development needed for school success. A disproportionate number of at-risk students are among minorities because of the social and economic histories of these groups. Programs based on a recognition of the problems causing risk and designed to overcome them can be successful. Public policymakers can promote changes in the training, standards, counseling and selection, and support of teachers and administrators that can reduce the risk for many elementary-school and adolescent students. But because such changes are difficult to bring about, effective schools for at-risk elementary-school and adolescent students rarely exist.

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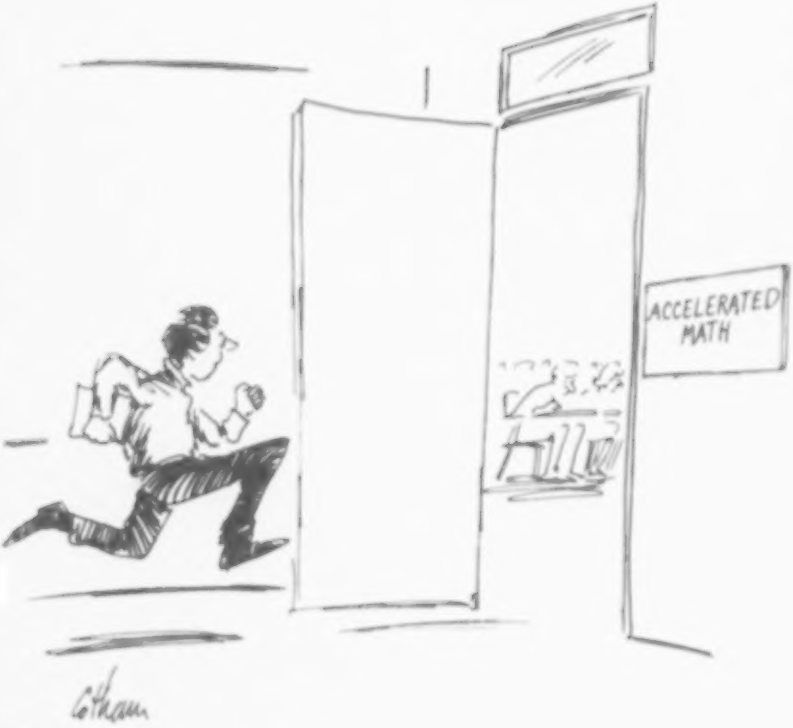

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Public Support for Successful Instructional Practices for At-Risk Students

by Asa G. Hilliard III

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Many educators are able to teach at-risk students so that the overwhelming majority of those students are able to master a regular academic curriculum. Herbert Walberg's paper summarizes much of the effective-schools/effective-teaching literature. However, I would like to cite several examples of effective instruction with at-risk students.

Ball-Stick-Bird **(Fuller, 1977)**—This is a reading program that I and many other educators have used. Children and adults, including "retarded" and "learning-disabled," actually learn to read a simple sentence in the first 20 minutes of instruction, even before the full alphabet and phonics system are learned!

Marcus Garvey School—Several years ago this private school, which serves mostly low-income African-Americans in a low-income Los Angeles neighborhood, challenged a magnet school for the gifted in the Los Angeles City Schools. The third-grade class at Garvey defeated the sixth-grade class at the school for gifted children on a basic skills test! When the Garvey school first started operations, none of its teachers had a college degree.

Project SEED—Nearly 20 years ago a high-school teacher in the Berkeley, California, public schools became alarmed at the rate of failure of so many minority children. He decided to start a program to improve the self-image of these children. He reasoned that the shortest route to that goal was to teach the most prestigious academic subject (mathematics, not arithmetic) at a

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relatively advanced level to the low-performing students. Elementary-grade students who could solve equations with unknowns and understand exponentiation logarithms and other mathematical operations developed a more favorable image of themselves, especially since this subject and topics are normally offered during high school or during the first year of college. Project SEED has now been demonstrated all over the United States and in foreign countries. It has been demonstrated to state legislatures and even to the Congress. At least one public school system, Dallas, has tried it on a broad basis over several years. Though costly to operate because of the use of outside teachers from private industry, the pedagogy is appropriate for any teacher. Oddly enough, it is virtually unknown in teacher-education institutions.

Dunbar Elementary School—is a public school in one of Atlanta's lowest-income areas. Over the past decade, Dunbar students have ranked near the top of the distribution of school averages on basic skills tests. Dunbar has not followed any special "canned" program nor used any gimmicks or special equipment. The principal, Ms. Marjorie Gosier, says that she merely leads the faculty in its role as a professional problem-solving team.

Dynamic Assessment and Instrumental Enrichment—Dr. Reuven Feuerstein (1979), a student of Jean Piaget and Andre Rey, was charged by the government of Israel to create a solution to a national problem. Many immigrants to Israel had not been exposed to Western systems of formal schooling. Dr. Feuerstein created an approach to overcome the deficiencies in cognitive functioning that he concluded were caused by the absence of exposure to the type of thinking required in schools. Through the use of this approach, many low-performing students have been transformed dramatically. Many students now in special-education classes are fully capable of functioning effectively in regular academic classes with confidence, if provided with Feuerstein's sophisticated diagnostic and mediation program. (Note: Many low-performing students have never been exposed to appropriate mediation in the form of teaching. Therefore, we do not remediate what was never mediated in the first place.)

Adult Literacy—Paulo Freire (1973) taught adults in poverty who were illiterate to read well enough to read their daily newspaper with about 30 hours of instruction! Freire is finally being recognized in the United States for his liberation pedagogy, a pedagogy that uses reading as a vehicle for teaching critical thought and critical consciousness to adults who seemed to have given up and joined the "culture of silence."

Many more examples could be cited. It is not my intention to urge the adoption of any of these particular programs, although I am highly impressed with all of them. I cite these examples merely to show that many people are already successful in teaching at-risk students. I also want to use these examples to make a few points about pedagogy. Among other things, these few examples teach us that

1. At-risk students can be taught successfully to perform at demanding academic levels.

2. Dramatic positive changes in the academic achievement of at-risk students are possible within a short period of time.

3. There is no one way to achieve success with at-risk students. Some of the examples cited above were of formal programs. Some involved specialized materials. Others, such as Project SEED, Dunbar Elementary, and Freire's work, involved no specialized materials or formal programs. Success was possible within public or private school settings.

4. We know how to help at-risk students now!

5. There are no absolute critical periods with human beings. It is never too late to learn.

6. At-risk students thrive on intellectual challenge, not on low-level remedial work. The successful approaches do not imitate the procedures for pigeon training. Abstract, conceptually oriented critical thought stimulates low-performing students.

7. There is no special pedagogy for at-risk students. The pedagogy that works for them is good for all students. Further, at-risk students fail to achieve because appropriate regular pedagogy has not been provided to them.

8. There are not natural racial or ethnic barriers to teaching success. The examples that I have cited above involve every conceivable combination of teachers and students by race and ethnicity. The real issue is teacher competency and will.

9. No new research is needed. We have hundreds of examples of good teaching in action. We need to spread the word. This is not to minimize the key role that research will play in education. I merely want to emphasize that at-risk students do not have to wait until some magical mystery solution is invented. They can be helped with what is now known!

10. It is interesting to me that most of these approaches apparently are not well known to teacher educators, even in the cities where programs are headquartered and in some cases have been located for nearly two decades. Moreover, many teacher-education institutions seem not to be aware of many, if any, locations where teachers are successful with at-risk students.

11. In all of the cases I cited, the schools or teachers achieved the results alone. No large-scale mobilization of parents was required. The basic demographics of the communities were unchanged. None of the negative forces often cited to explain the failure of instruction operated to derail these teachers. Naturally, we want poverty to be eliminated. Naturally, we want children to be with both parents and to be well nourished. However, in the absence of these things, good teaching can still produce success in learning.

In short, the evidence is overwhelming. Teaching is a potent force. The real problem is to manage the politics so that good teaching can be provided for all students.

Many years ago, the late Ronald Edmonds, whom many consider the father of the effective-schools movement, made this statement: "We already know everything that we need to know in order to educate all of the children. Whether we do or do not, depends in the final analysis upon how we feel about the fact that we have not done so, so far." Edmonds and his associates developed a body of literature based on their research which showed that all children, regardless of race and socioeconomic status, were fully capable of achieving in the regular academic program of the school. Actually, the real meaning of Edmonds' research had less to do with the capabilities of children than with the capabilities of school people. Prior to the school-effectiveness movement, it was widely believed among professionals and others associated with the public school that school factors did not determine children's success in school. When children failed in school, explanations for their failure almost invariably concluded that the causal factors were family income, nutrition, cultural deprivation, and so forth. The idea that schools alone could change their practices so that children's achievement would rise significantly was almost a heresy.

Now researchers know what many good educators have known and said all along. These conclusions can be summed up as follows:

1. The vast majority of at-risk children are fully capable of succeeding in the academic program of the public schools.

2. At-risk children do not need anything special by way of pedagogy. In the overwhelming majority of the cases, the at-risk children fail because an appropriate quality of ***regular instruction*** is not made available to them.

3. Even under circumstances where at-risk children have fallen behind in their academic work, when given appropriate regular pedagogy, they can catch up with their age peers and, under certain circumstances, may even do better than average for their age group.

The At-Risk Concept

If these things are true, what do we mean by "at-risk child"? For many people, the term indicates a student with certain specific mental deficiencies. Such a student is sometimes considered not simply to be deficient in achievement but also to be deficient in the basic capacity to achieve.

However, there is another way of thinking about what places the child at risk. A child, through no fault of his or her own, may be placed in a situation where *access* to an appropriate quality of regular instruction is restricted. For example, poverty and minority-group status are likely to place children at risk for the simple reason that both of those factors are often associated with the lack of distribution of high-quality services to children. Teacher turnover may be very high in low-income neighborhoods. Further, many professionals regard assignments to schools in more-affluent areas as most desirable; hence there is greater competition among able professionals for such assignments. Many teachers also try to avoid or resist being assigned to less desirable schools. The net effect is that children do not have an equal opportunity to be exposed to the best teachers schools have to offer.

Consequently, the greatest risk poor and minority children may face is that which comes from our incorrect perception of the problem. Such a perception causes us to blame the child for what we have failed to provide and to search for solutions through an examination of children rather than systems.

The Impotence of Reform

During the past decade, in spite of numerous school-reform reports and abundant school-effectiveness and teacher-effectiveness research, most efforts have failed to address meaningfully the problems of low-achieving students or students considered to be at risk. Many of the school reform reports are not equity-oriented at all. A few school-reform reports appear to be "excellence"-oriented. Some educators have suspected that the "excellence" terminology is sometimes used not as evidence of a concern for excellence at all, but as a code word to signal a retreat from the decade of "Great Society" equity efforts in education. Even if this is not the case, there is little or nothing in the school reform reports and effectiveness research in general that offers promise for the massive changes in education necessary to save the huge number of children in our systems who are at risk.

While school-effectiveness and teacher-effectiveness research have answered certain questions, they still leave other very important questions unanswered. For example, it is clear that schools can be turned around. They can produce academic achievement where it was not expected or predicted. However, virtually all of the school-effectiveness and teacher-effectiveness research suffers from the same general flaw. The researchers' criterion for success in almost all cases has been the achievement by students of *minimum competencies*, usually in "basic skills." Tests of basic skills are given to students before and after some type of instructional treatment or when comparing different types of educational settings.

What is missing from the research is a set of studies that use *maximum-competency* criteria. This is important, since once successful schools are identified using minimum-competency criteria, then various types of fine-grained analyses of school processes are undertaken. Participant observation, ethnography, or other forms of examination of school practices help to explain the successes that are seen. Based upon such analyses, general characteristics of effective schools have been identified. But as stated earlier, these are characteristics that describe schools that are effective in producing *minimum* rather than *maximum* competencies.

Some educators assume it takes the same type of professional effort to produce minimum competencies as it does to produce maximum competencies. My field experiences tell me this simply is not the case. Having observed many maximum-competency schools in operation, I have found many characteristics present in them that were not identified in the minimum-competency research. For example, many maximum-competency schools seem to rely upon high levels of academic preparation for the teaching staff; the development of a special ethos; a shared high-level academic mission among the faculty; and the extensive and appropriate use of well-conceived and well-planned field trips, outside speakers, and so forth. We need a great deal of research to determine if these and other variables typify the maximum-competency schools.

Problems with the Use of Effective-Schools Research Results

I also believe educators find great difficulty in putting the results of school-effectiveness research and the recommendations from the school-reform reports into practice, for a very simple reason. Committees, observers, and researchers usually participate in a data-rich environment. That is to say, when they observe live situations or when indirect observations are made close to the source, many things become apparent other than the specific things the researcher is interested in and will later report. Such additional things may actually be major factors influencing success.

However, reports of research usually are presented in summary form. For example, the whole body of school-effectiveness research has been summarized into checklists usually numbering a dozen or so items. While these checklists may indeed identify general critical characteristics of an effective minimum-competency school, it is difficult to use them, as some educators do, for direct planning of day-to-day professional activities. For example, if one characteristic of an effective school is that "the leader monitors closely the work of teachers and students," then we have a simple statement of what may in fact be a complex reality with many possibilities. There are an unlimited number of ways by which an educational leader may perform such monitoring. The particular ways that are chosen must be responsive to the personal styles and characteristics of the people involved and to the context within which monitoring is to occur. It is very difficult to go from the general principle that monitoring should occur to particular requirements about the *way* that monitoring should occur.

The school-reform reports, the school-effectiveness reports, and the teacher-effectiveness reports can, should, and often do serve to stimulate the best in professional thinking and, hopefully, in practice as well. However, something more is needed if the benefits of these insights are to be made available to teachers and students.

Making Success with At-Risk Students Real

It is extremely important for educators to realize that live examples exist of what to do. I have found such examples in schools in almost every major city! However, I have seen few examples that are districtwide. One of the most surprising things to me is that in district after district I have visited, local examples of success are not widely known among either the teaching staff of the district or among the administrative staff. Occasionally, outstanding local examples of success that are publicized in the popular media appear to be resented by some who do not know about the example from firsthand experience.

It is unlikely that school-district leadership can use existing local examples as universal models to be applied throughout an entire district. But what can be applied throughout the district is the identification of high-quality site leadership, which in turn would be allowed the flexibility to do what was necessary to produce an effective school, especially an effective school at the maximum-competency level. This does not mean that a laissez-faire school leadership situation should be established. Nor does it mean that examples of excellence cannot be useful for educators other than at a particular local school site. What we must remember is that while maximum-competency models may not be easily mass-produced, they can be used in other ways. The central administration can make it possible for school-site leaders to visit schools that are examples of success.

It has been my experience that there are far too few opportunities for such visitations to take place. As a result, many excellent examples of school leadership go unobserved by peers. For such examples to be useful, teachers and administrators must make frequent, in-depth visits and have opportunities for discussion among peers.

In the final analysis, there is no substitute for the professional judgment of the school-site leader, i.e., the principal, even while that leader must be accountable for results to central authority. The leadership functions of a principal cannot be standardized or made mechanical. The element of professional judgment must always be considered. However, this judgment can be influenced significantly by a broader awareness of school success with at-risk students. *Many principals have never seen a successful school that serves at-risk students.* Therefore, they have no models with which to work. Many such principals will actually hear about the reports of research on effective schools and on effective teaching. Most of them accept this research intellectually, but may not be able to internalize it at an operational level in the absence of opportunities to experience a concrete reality.

Teacher Education and At-Risk Students

Many children are at risk because of the quality of the teacher-education process. Like public-school education, teacher education also has been undergoing reform. Many new proposals for teacher-education reform have been made. Among the most recent reform reports are the Carnegie Corporation and Holmes Group reports. However, these reports seem to contain many of the weaknesses of public-school reform reports. In the case of teacher education, changes are recommended with no data to show that those changes will mean better teaching as measured by better results in student academic achievement or other forms of achievement. If the basic "it," or standard content, of teacher education does not change, then making other changes will be like rearranging the deck chairs on the *Titanic*.

Every teacher education institution should be able to identify a pool of successful schools for at-risk students. Such successful schools can serve as examples and as laboratories for teacher training and administrative leadership training. I continue to be amazed that virtually all of the most powerful examples of successful teaching approaches for at-risk children I know about are infrequently used by faculty of the regular teacher-education programs in cities where they are located. For example, Project SEED is located in Berkeley, California, and is headquartered in Washington, D.C. It is a very successful teaching approach that has been used for almost two decades. It teaches high-level mathematical skills in algebra to elementary-school children from kindergarten through sixth grade. Yet, in spite of the success of this pedagogy, there has been little or no involvement of university teacher-education faculty in the observation, analysis, and utilization of Project SEED's strategies in teacher training. The same thing may be said of Dr. Feuerstein's model for working with low-performing children in special education, *The Dynamic Assessment of Retarded Performers* (diagnostic testing) and *Instrumental Enrichment* (remedial teaching). This failure to use successful approaches would be understandable if other effective or successful approaches to teaching at-risk students were well known and widely presented in teacher-education programs. However, this does not appear to be the case.

Above all, teacher-education programs must have *valid models* of service to at-risk children for demonstration purposes. Ideally, they should have many valid models.

Why Do We Fail to Be Guided by Known Success?

One may ask why, if the knowledge of how to be successful with at-risk children is available and if it has been available for a long period of time, such knowledge has not been transferred. I believe there are several reasons:

1. Many of the successful models are simply not studied at all. For example, many private schools are consistently successful in producing high levels of academic achievement for their students, including at-risk students. In fact, some of these private schools, such as the Marcus Garvey School in Los Angeles, were established for the exclusive purpose of educating at-risk students. Yet we have little or no research that would enable us to describe what is going on in such successful maximum-competency private school operations. Therefore, these schools' understanding of success cannot be transferred easily to other schools.

2. Many of the studies of effective instruction are not ethnographic studies. The research models that have been popular in education for decades are primarily statistical and static. The *process* of education itself is not studied often enough through the most sensitive methodologies available for that purpose. Participant observation, ethnography, and other forms of anthropological observation are often better suited for studying school processes than are those which have been developed for psychological research. Shirley B.

Heath's *Ways with Words* and Ray Rist's *The Urban School: A Factory for Failure* are examples of the types of revelations possible when appropriate methodologies are used.

3. Many studies miss the active principles in success even if they are ethnographic or participant-observation studies. This is dependent upon the degree of sophistication and insights of the researchers. For example, Dr. Barbara Sizemore's study of effective schools identifies several variables that have been missed by most school-effectiveness researchers (Sizemore, 1985). One of these variables is particularly interesting. Dr. Sizemore describes a general attitude of successful principals: "They have made a decision that they don't want to be superintendents." The statement captures the independent, single-minded, task-oriented, risk-taking streak that is present in many successful principals. For example, such principals would not accept the assignment of faculty to their school who they believed would not get the best work from children. As a result, many such administrators were frequently in trouble with the central office and were often seen as noncooperative.

Another example of locating the active principle in success is found in the work of William Johntz in Project SEED. For Johntz the academic preparation of teachers in mathematics is critical. It is only when that preparation can be assured that the matter of pedagogy should be faced. Then the type of pedagogy becomes extremely important. In this situation, as in the case of Mortimer Adler with his *Paideia Proposal*, the foundation of the pedagogy should be the "Socratic" questioning method, a method that can be executed successfully only if the teacher has a broad and deep reservoir of content.

The active principle in success, for Dr. Feuerstein, is that *mental structures* for poorly performing students must be changed. The goal of his system of Dynamic Assessment and Instrumental Enrichment is structural *cognitive modification*, or fundamental changes in the basic habits and patterns of information processing. In the case of Freire, the *use by the teacher of the student's prior knowledge and the awakening of the student* by the teacher to the student's own creative history as the foundation for critical dialogue are key principles. Still other educational leaders have pointed to the social environment surrounding the schools that can operate in support of the school. Community awareness of the school, community participation in the school, and especially school participation in the community all point to active but hidden ingredients in some schools' success.

4. Many studies waste time and resources with a focus on presumed environmental preconditions for learning rather than upon successful instructional practices, regardless of the environment. Such studies deflect the attention of professionals to things that are not truly essential in the design of good teaching practices.

5. Many "projects" are funded for implementation without sufficient infrastructure to support the intervention. For example, the Detroit Public School System recently made a commitment to implement a program of Dynamic

Assessment and Instrumental Enrichment. The superficial way to implement such a program would have been to provide minimal training for a small group of teachers and psychologists who were to receive Dynamic Assessment training and for the group of teachers who were to receive training in Instrumental Enrichment (remedial instruction). However, the Director of Special Education and her associates understood very quickly that much more would be needed to prevent those individuals who had learned new methodologies from being absorbed into a vast system, being isolated within the system, and operating without reinforcement. As a result, the Department of Special Education made special efforts to build a strong infrastructure within the school system so that the program would have the greatest chance of success. The building of that infrastructure included the following elements:

a. Sufficient numbers of professionals were trained in order to have a criti-cal mass within the district who "spoke the same language" and could serve to critique district efforts.

b. Proceeding on the fact that many things learned are quickly forgotten if not reinforced, the school system provided extra depth in the professional training process. Efforts of all teachers were reinforced through extra in-depth training, numerous opportunities for professionals in the program to meet and review what they had been doing, and opportunities to plan for joint activities in the future. Many other steps were taken to build the infrastructure in support of Detroit's professionals. Those efforts appear to be paying off.

All of these factors together help explain why knowledge we have about how to succeed with at-risk students is not transferred into regular practice.

Why Well-Intentioned Public Policy Efforts Fail

Why does public policy seem to show such inconsistent or poor effects? Many educators and policymakers have succeeded in establishing rules and programs designed to help at-risk students. Yet many of these efforts have not borne the fruits their designers hoped for. There are many reasons for this failure, including the following reasons:

1. Often with the best of intentions, policymakers actually mandate poor practice. For example, the Education of the Handicapped Act (Public Law 94-142) was designed primarily as an accountability system to guarantee due process and equal access for children to educational opportunity. As a part of that process of accountability, an *individual education program* (IEP) for children was required. This requirement has resulted in massive activity among educators all across the country. As I have observed, it has also been massively misunderstood. Many educators have tended to view the IEP as a pedagogical tool, whether or not they have faith in it as a tool, instead of as an accountability instrument. Yet, to my knowledge, there are no data to show that the use of IEPs results in greater gains for children in school.

2. Many public policy efforts maintain a "mission control" mentality. This

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means that the management of day-to-day instructional decision making often tends to be centralized outside the school site. This is seen most clearly in the many reading programs in use in some school districts. The adoption of a basal series almost requires that all teachers approach the teaching of reading in exactly the same way, even on the same schedule. The poor results of such practice with at-risk students should suggest the need for extreme caution in mandating the day-by-day actions of teachers.

3. Policymakers are confronted with the decision of whether to use the "stick" or the "carrot" in putting requirements before teachers. I believe that the vast majority of teachers want desperately to succeed. They want to enjoy their work; they want to receive the feedback that comes from doing a job well. Most will take risks in order to improve their professional skills and to try new approaches that may succeed with children who are at risk. Categorically, the carrot is better than the stick in encouraging that participation.

4. Policymakers often legitimize false categories, leading ultimately to the instant institutionalization of poor practice. For example, I can think of little worse in school pedagogy today than the long-time use of the categories "educable mentally retarded" and "learning-disabled." Especially for the category "learning-disabled," there is no professionally agreed-upon definition whatsoever. We do not know what it is; we do not know how it works, or if it does. And there certainly are no specialized pedagogies that are successful in dealing with learning disability. Yet, when policymakers fund and require teacher certification and child labeling and placement in such categories, or require educators to use such categories in the design of instruction, they reinforce invalid pedagogy to the detriment of at-risk children. Funding in such cate-gories should be provided only when it is clear that *children benefit* from the practices associated with the category.

5. Finally, policymakers who attempt to ensure an adequate quality of performance for children at risk often use paper-and-pencil criteria rather than performance criteria when determining teacher competency. For example, legislative requirements that teachers pass paper-and-pencil exams for admission to teacher education, for exit from teacher education, and for licensing ignore the fact that there is no guarantee that high scorers on such exams will be good teachers. At the same time, no data exist to show whether those who are excluded from teaching because of low scores on paper-and-pencil exams are poor teachers.

Taken together, these represent the types of public-policy decisions that may have an effect exactly the opposite of that intended.

Making Public Policy for Success with At-Risk Students

How can public policy change the outcome for children at risk? In view of the fact that public-policy actions can exacerbate the risks some children face, it is even more important for policymakers to realize the possibility and high desirability of appropriate use of public policy as an instrument for reducing the risks for at-risk children. With risk reduction as the goal, the following activities by policymakers should be considered.

1. At-risk children can be helped by public policies that support valid inservice training for the present teaching staff to improve both teaching methods and academic grounding in content. In the case of pedagogical training, public policy should support only such training as can be clearly demonstrated to improve teaching practices (as measured by positive changes in student performance).

2. In view of the fact that many successful approaches to serving at-risk children appear to be performed under isolated conditions, it is important that a massive effort to provide for the videotaped documentation of successful practice in natural school environments be supported. Such videotaped documentation can, over time, be carefully edited in order to illustrate in real terms that teachers can be successful with at-risk students and to show what it is about teaching that produces student learning. Many of the present audiovisual materials on teaching methodology are not done in live classrooms. They are contrived and in no way represent a realistic portrayal of what actually takes place in schools. Such videotaped documentation would be a major effort, one which has yet to be done on the scale necessary.

3. Public policymakers can require content equity in the educational program of the school. The school curriculum must be desegregated. All vestiges of racism, sexism, or any other kind of "ism" must be removed. But more than that, it is important to reconstruct the whole store of the *human* experience as it applies to every content area of the curriculum. A good example of how this can be achieved is the Portland (Oregon) Public Schools Multiethnic Curriculum Project. It is a project in which outstanding international experts (with appropriate multiethnic backgrounds) in five academic disciplines, working with diverse ethnic community groups, completed a massive multiethnic curriculum change. The content areas were science, mathematics, language arts, art and music, and social science.

4. Policymakers can improve the educational environment for at-risk children by insisting that psychological assessments have instructional validity. "Instructional validity" means that the use of psychological assessment must be shown in the long run to be beneficial to children. Nothing is worse for at-risk children than to subject them to seemingly scientific assessment practices that do not have the ultimate result of contributing positively to their academic achievement. When a child is assessed and continues to perform below par, the impression is given that his or her low performance has been scientifically validated.

5. Policymakers can make a major contribution to the education of at-risk children by supporting the identification of local demonstration sites that are successful in the education of at-risk children. These sites could then be made available for professional visitation and their use encouraged. In addition to locating live-demonstration sites, policymakers should support research to document and validate the professional practices that are observed. Policymakers should reward success through its systematic study and its representation to the broader professional community.

6. Policymakers should insist on true reform of teacher education—reform that focuses on the clinical program for the training of teachers. In order to do this, the education program must be staffed by clinical professors who are able to demonstrate to teacher-education candidates the pedagogical strategies they represent, especially those strategies effective with at-risk students.

7. Policymakers can improve the educational environment for at-risk children by supporting an expanded co-curricula program for the schools. More than all other children, at-risk students need a broader exposure to the wider community in order to provide information and socialization opportunities most of them do not have. Over the past few decades, some schools have de-emphasized the co-curricula program in an attempt to focus more on the "basics." This should not be an "either/or" proposition but a "both/and" one, especially where at-risk children are concerned.

8. Finally, policymakers should set maximum-competency standards for all children and should then move to provide the services necessary for all children to reach maximum competency. To measure the effectiveness of schools by appeal to minimum-competency data is to institutionalize low expectations for children. The low expectations will be followed by low performance. On the other hand, reaching for the higher standards, if supported, can make a significant difference in the academic achievement of at-risk students.

Conclusion

Children are least at risk when we decide that their education is our highest priority. They are most at risk when we decide that the pedagogy required for them is complicated and beyond the reach of ordinary teachers. There are political problems that make it difficult for us to do what is best for our children. We must approach these as political rather than as pedagogical problems. All we need in order to solve the pedagogical problems is the will to do so. Certainly the efforts of the chief state school officers here and in further planned activities offer a bright ray of hope, perhaps the brightest in nearly a decade. If you [chief state school officers] are determined, we can win!

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Strategic Improvement That Focuses on Student Achievement

by Robert E. Blum and Anthony W. Kneidek

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■ *Bethel School District found a process for strategic improvement that ensures success for all students.*

When Kent Hunsaker took over as superintendent of the Bethel School District near Eugene, Oregon, four years ago, he found a district without a mission, without a vision, and without an articulated belief system to guide its staff and students. He also found a community eager for change in its school system, which serves nearly 4,000 students in grades K–12. The way to get things done, many told Hunsaker, was to "tell people what to do."

But Hunsaker did not embrace the authoritarian model. "It's certainly a way to get things done quickly," he notes, "but it's not the way to get things done well."

Hunsaker and his staff opted to get things done well—they embarked on a journey of strategic planning and improvement toward a destination of improved student outcomes and increased productivity. Under Hunsaker's leadership, the Bethel School District became one of the pilot sites, along with other school districts in Montana, Oregon, and Washington, for "Creating the Future" (CTF), a research-based, district-level strategic improvement process developed by the Northwest Regional Educational Laboratory (NWREL) in Portland, Oregon.

Robert E. Blum is Director of the School Improvement Program, and Anthony W. Kneidek is an editor/writer at the Northwest Regional Educational Laboratory, Portland, Oregon.

The Key to Creating the Future

The idea behind strategic improvement is to bring the entire school district to focus on student learning and improved student outcomes. It's much more than strategic planning. It means ensuring learning success for all students.

"Strategic planning is essential, but it is not sufficient to cause lasting changes in school districts," says Thomas A. Olson, Director of the Professional Development Program at NWREL. "The training and technical assistance service provided in Creating the Future includes the teaching and learning of all steps in an improvement process rather than strategic planning alone."

Creating the Future strives for improved outcomes of schooling for all children, including those youngsters who are at risk of educational failure, dropping out, or just barely getting by in school. CTF is an outgrowth of the highly successful "Onward to Excellence" (OTE) program developed by NWREL nearly 10 years ago. OTE, also research-based, involves teachers and principals in setting goals for long-term change in their local schools. Adopted by more than 600 schools, Onward to Excellence is a cyclical process, a method whose final step is not an ending, but renewal.

After nearly 10 years' experience with OTE, we sensed that a similar type of planning at the district level would be useful. We developed CTF to involve the stakeholders in the system—classroom teachers, students, school administrators, classified personnel, school board members local merchants, central office administrators, and community representatives—in an ongoing process aimed at improving student outcomes. Now CTF can accomplish at the district level what OTE does at the schoolhouse level. CTF helps to emphasize districtwide responsibilities for student success in addition to the responsibilities at each school (see Figure 1).

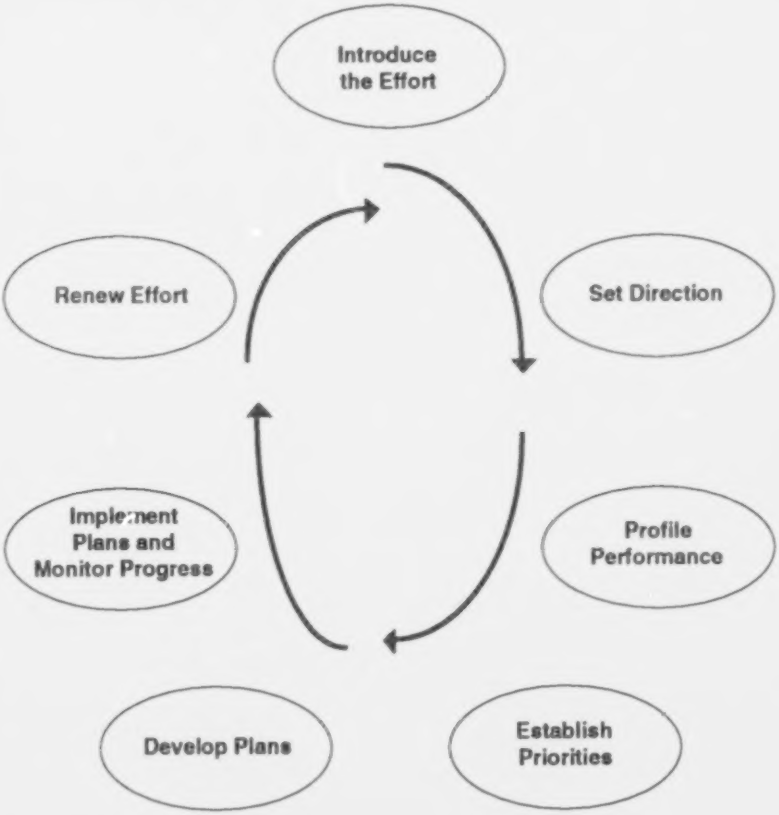
Promoting Lasting Change

The focus on productivity and achievement sets CTF apart from other strategic planning efforts. The purpose of Creating the Future is to establish a process in school districts that can be used again and again to improve the outcomes of schooling for all children and youth. The intent is to promote substantial, lasting change in the way school districts go about improving and renewing themselves. We expect districts engaging in the process to achieve deep cultural and structural changes over time.

CTF accomplishes its mission by concentrating on several key elements, including:

- **A focus on student performance.** The district planners are able to specify values and beliefs, a vision of excellence, a mission, and general student learning goals through direction-setting activities that enlist the efforts of school staff, community members, school board members, and others. This direction-setting process helps clarify what students are to learn and influences curriculum, instruction, staff development, and assessment.

Figure 1
District-Level Strategic Improvement Process


Introduce the Effort
Set Direction
Profile Performance
Establish Priorities
Develop Plans
Implement Plans and Monitor Progress
Renew Effort

The Creating the Future process brings focus to district-level strategic improvement efforts. All efforts are aimed at improving results for students. Priorities redirect resources and energy toward important outcomes and provide the basis for discontinuing some programs and activities.

- **Both a strategic improvement and a strategic planning process.** To begin with, the district teams initiate planning processes, including direction setting, profiling, priority setting, and action planning. Subsequently, these efforts are supported by implementing planned improvement activities, monitoring progress and troubleshooting, and evaluating and renewing their efforts.
- **Collegial action** to ensure success in learning for all children and youth.
- **A data-driven process.** Each district team develops a local profile, including information on student performance, district and community characteristics, and ongoing improvement activities.
- **A research and theory base** in areas that include change in education, professional development, and adult learning.

Not surprisingly, central office support enhances improvements at the school level. As NWREL's Effective Schooling Practices (1990) states, "The district creates an environment in which the pursuit of instructional effectiveness is valued. Clear and stable policies, expectations for improvement, and strong systems of support—all help schools become more effective."

Districts are accountable for expecting, supporting, and monitoring school efforts; and schools are accountable for their results (see Figure 2). As Olson asserts, "Schools are a lot more effective where the central offices have their act together."

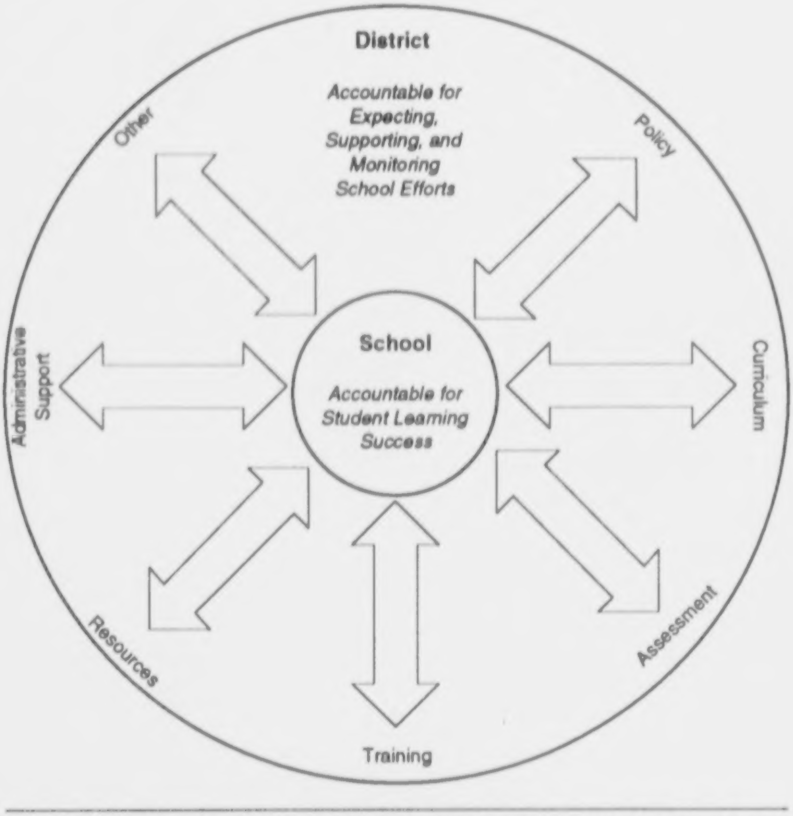
Developing Leadership

Creating the Future requires six training sessions over a two-year period. Each formal training session includes a mix of cooperative learning activities and exercises for developing guidelines and goals for future improvement.

A leadership team of 10 to 15 members guides the local improvement effort and is responsible for communicating with various stakeholders in the community (see Figure 3 on page 102). In the Bethel School District, for example, the leadership team members worked with about 70 other people, half of them community members, in establishing a statement of values and beliefs, a vision for the future, and student learning goals. The communications groups also help set priorities for improvement, support implementation efforts, and monitor progress.

The student learning goals are crucial in the development of all other improvement efforts. These are global goals that the district and community believe their students should master by the time they graduate. For example, the Salem-Keizer School District, which serves about 27,000 students in Oregon's central Willamette Valley, is another pilot site for CTF. There, the goals include (1) challenging all students to develop lifelong learning skills in communication, critical thinking/problem solving, human relations, personal development, self-concept, and citizenship and (2) developing an understanding of and involvement in cross-cultural, global, and environmental relationships.

Figure 2
District-School Responsibilities

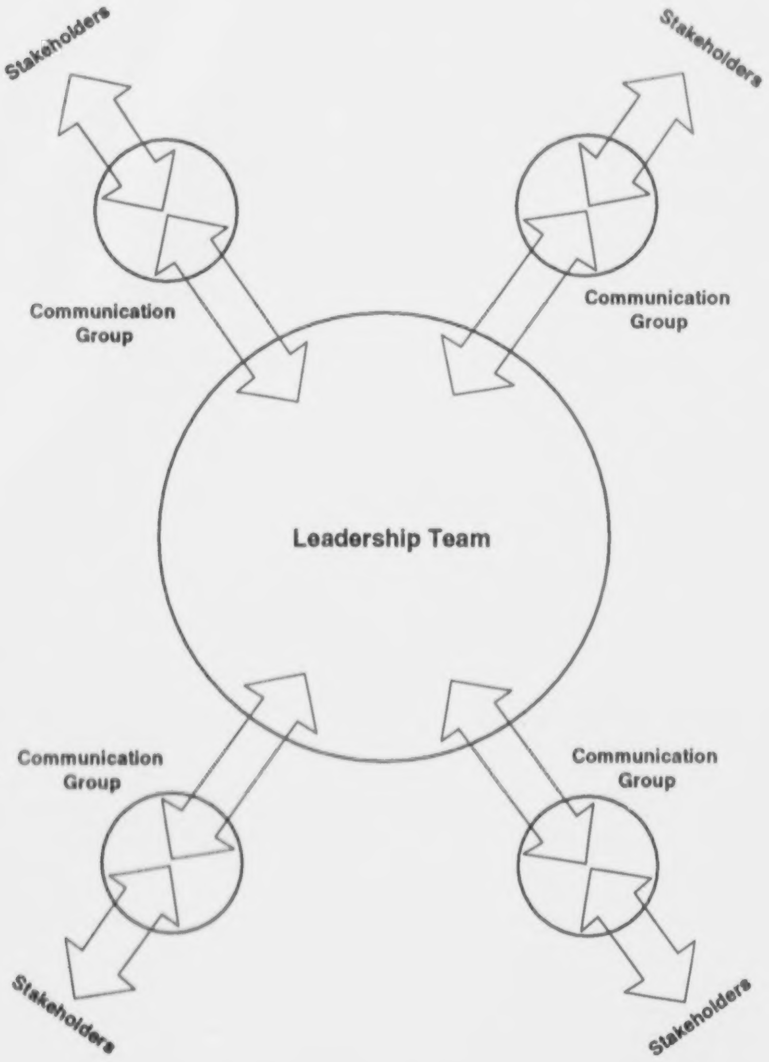

District
Accountable for Expecting, Supporting, and Monitoring School Efforts
Other
Policy
Administrative Support
School
Accountable for Student Learning Success
Curriculum
Resources
Assessment
Training

Schools become increasingly accountable for results while districts develop the support systems essential for schools to achieve learning success for all of the students they serve.

Once the student learning goals are established, a profile of student performance can be developed, and methods of measuring student progress in achieving the goals can be adopted. All district activities, from curriculum development to staff training to assessment, can then be designed to support the student learning goals and improve student performance.

Like OTE, CTF provides an ongoing process of improvement and renewal. The initial three-year commitment provides a district with a framework

Figure 3
Structure for Involvement


Stakeholders
Stakeholders
Communication Group
Communication Group
Leadership Team
Communication Group
Communication Group
Stakeholders
Stakeholders

Formal structures for continuous, meaningful invovlement of all "stakeholder groups" are critical to the success of strategic improvement efforts.

for improvement, a set of student learning goals, a method to achieve goals, and a plan to evaluate them. The process is then renewed, revised, improved, and strengthened.

CTF provokes thoughtful deliberation and frequent communication among various stakeholders in the community. Of course, frequent two-way communication is time-consuming. In the rush to improve, it is much easier to just move ahead, thinking that people will come along. They won't. Thought and energy are necessary to bring people along, and improvement efforts gain strength as broad discussions bring out beliefs, values, and ideas from stakeholders. Bringing people together to achieve important priorities through consensus development and collaborative activity is the heart of improvement work.

Bethel's Journey

Bethel's journey was filled with bumps and potholes: a breakdown in contract negotiations led to a strike by teachers that jarred the community and strained efforts to strategically plan for the future, and financial problems have plagued the district. But in 1989 voters approved a $12 million tax base as well as a capital improvement bond. And the emotional fractures left over from the strike have begun to heal.

One of the first things the district did as part of the CTF process was to develop a profile of student performance and other data to provide a framework for future activities. "We found some pretty mediocre stuff," Hunsaker admits. "We were pretty much at national norms in most areas. But we have a belief system that says we're better than that. The question then became *How do we go about getting better?*"

An eight-person leadership team (including the superintendent, two board members, the curriculum director, two teachers, a teacher's aide, and a principal) guided the community through a process of analyzing the data in the profile and setting priorities for improvement. With a great deal of input from all key stakeholders, the team decided that the best way to improve the district was to concentrate on improving each school. "We feel very strongly about the autonomy of our schools," Hunsaker says. "We want all our people to participate in school improvement."

As a result of that philosophy, Bethel adopted a districtwide goal that reaches to the grass roots for improvement. Within three years, each of Bethel's eight schools will develop profiles of their communities, define student learning goals, and create programs to achieve them; then monitor progress, suggest areas for improvement, and reinforce strengths.

Districts involved in strategic improvement should be prepared to spend time and effort on the task. "In education, we expect things to take place on a nine-month cycle," say Hunsaker. "As long as we look at things that way, we'll never accomplish anything of meaning. With Creating the Future, we'll be measuring our success at 18 months or, perhaps, 24 months. We'll look at test scores, discipline, grades, attendance records, student attitudes, and many other measures to check our progress. Then we'll plan for further improvements."

Hunsaker is confident that Bethel's efforts will produce positive results. "I'm a believer in the whole idea," he notes. "If we've focused on student performance and involved people in the process, I'm confident we'll succeed."

Authors' note: Portions of this material appeared in an article in the January 1991 issue of *The Northwest Report*, a regular publication of NWREL.

Several districts in the Pacific Northwest and Alaska have contracted with NWREL for CTF. NWREL will be assessing the impacts of CTF on student outcomes, staff perception and support, and the like.

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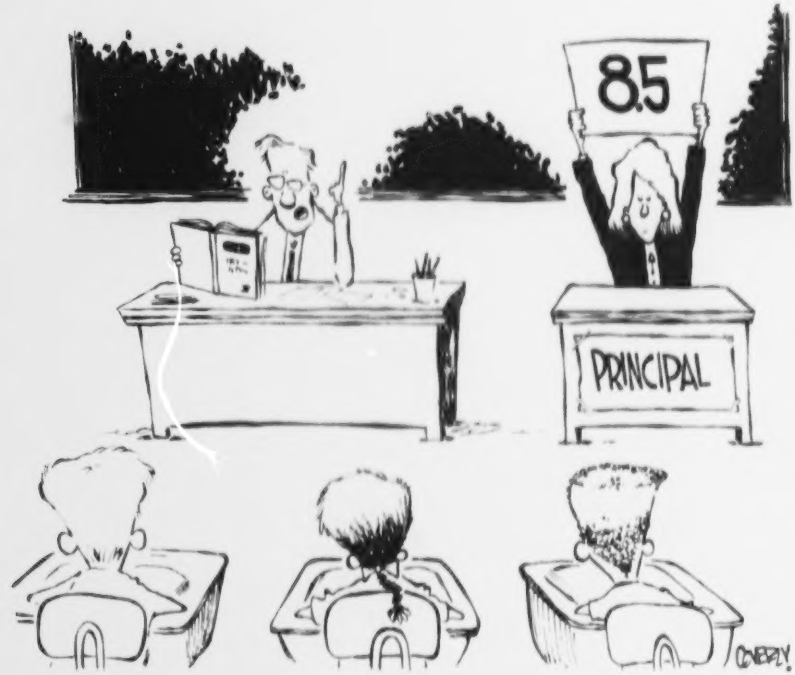

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"And that concludes the lesson for today."

The Algebra of African-American Achievement

by Barbara A. Sizemore

Reprinted with permission from *Effective Schools: Critical Issues in the Education of Black Children*. Ed. Percy Bates and Ted Wilson. Washington, DC: National Alliance of Black School Educators, August 1988.

The list of predominantly African-American schools which have narrowed and/or closed the achievement gap between African-American and white students in public elementary schools is growing. The most important in my 1987 studies[1] are: the Robert L. Vann Elementary School, with the longest record of high achievement; Madison Elementary School,[2] (a transition school), Westwood Elementary School, Miller Elementary School and McKelvy Elementary School, all K–5 schools in the Pittsburgh Public Schools (PPS), Pittsburgh, Pennsylvania; the Charles Rice Elementary School (K–6) and Maynard H. Jackson Elementary School (4–6), and the Lincoln High School, all public schools of the Dallas Independent School District (DISD),[3] Dallas, Texas; and the elementary schools of Community District Number 13, New York City.[4] However, this chapter will be devoted mainly to the research done in the Pittsburgh Public Schools (PPS).

During the 1979–1980 school year there were five predominantly African-American elementary schools in the PPS where 51 percent or more of the student body scored at or above the national norms in reading and mathematics on the standardized achievement tests given in April of the school year. These schools were abashing anomalies at that time.[5]

After a political struggle for control of the school board by the African-American and liberal white community, the priorities of the school system changed. First, the schools were desegregated and then the pursuit of excellence commenced. The goal was to elevate achievement in every school and

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especially those where large numbers of African-American and/or poor children were enrolled.

Three schools have narrowed the achievement gap between African-American and white students in reading by bringing the African-American students to or above the white norm in the system and three have done so in mathematics during the 1985–1986 school year. During the 1984–1985 school year one school accomplished this in reading and four in mathematics. In 1985–1986 the schools which accomplished a narrowing of the achievement gap in reading were Sheraden, McCleary (since closed) and Madison; in mathematics, they were Beechwood, Grandview, and Vann. In 1984–1985 the school which accomplished a narrowing of the achievement gap in reading was the Westwood; in mathematics, they were Beechwood, McCleary, McKelvy and Mifflin. All of these schools have something to teach those of us who seek to attain this goal. In April, 1987, Bon Air, Beechwood, Madison, Westwood, Phillips, and Dilworth schools closed the gap in reading while Bon Air, Westwood, Whittier, and Grandview schools did so in mathematics. Of these schools, Bon Air and Westwood were able to close the gap in both academic subject areas, but Bon Air tested only one African-American student. See Table 1 (page 107).

The high achieving schools of importance to my research are those with large numbers of African-American students: Madison, McKelvy, Miller, Vann, and Crescent. See Tables 2 and 3 (page 108). Miller and Crescent are in the PPS School Improvement Project (SIP).[6] The PPS and other school systems with such high achieving schools should hire social scientists trained in ethnography to describe the routines which accomplish this objective in these schools for replication. Some of these social scientists should be African-Americans.

In my study the schools which have narrowed the achievement gap have a principal who serves as the instructional leader and who has set the tone for high expectations for student achievement, accelerated growth, and high achievement in reading and mathematics. This principal develops consensus among the school actors (teachers, parents, and students) around high achievement as the highest priority of the school. Then the principal establishes processes for handling student discipline and parental involvement. Next, the principal and teachers through methods of arriving at consensus set up a monitoring system which informs them about their progress in achieving their goals (high achievement in reading and mathematics).

The PPS has also developed two programs for effective monitoring. One is the Pittsburgh Research-based Instructional Supervisory Model (PRISM) and the other is the Monitoring Achievement Pittsburgh Plan (MAP).[7] There are in fact three school improvement programs in Pittsburgh: (1) the superintendent's program for all the schools: PRISM, MAP, Schenley High School Teachers' Center, and Brookline Elementary Teachers' Center; (2) SIP for targeted schools; and (3) individual school plans such as Madison, McKelvy, Vann, Westwood, and those mentioned in the first paragraph (page 105).

Table 1

Ranking of 29 of the 47 Pittsburgh Elementary Schools at or above the National Norms for African-American Students on the California Achievement Tests, April 1987

	Name of School	# Black Students Tested	% at or above NN/ TQN in Reading	% Black, 9/22/86	Gains/Losses from Previous Year in Reading/Math		% at or above NN/TQN in Math	At or above WN or BN in Reading/Math	
1	Bon Air	1	100/100	2.6	+	+	100/100	+WN	+WN
2	Beechwood	18	89/50	8.5	+	+	74/42	+WN	+BN
3	Madison	230	84/48	98.5	+	-	78/47	+WN	+BN
4	Westwood	166	84/43	56.4	+	+	84/56	+WN	WN
5	Phillips	6	83/50	5.6	+	+	83/50	+WN	+BN
6	Dilworth	92	82/35	41.5	not open		80/41	WN	+BN
7	Sheraden	53	81/53	25.3	-	+	83/38	+BN	+BN
8	Liberty	165	81/45	46.7	+	-	75/45	+BN	+BN
9	Greenfield	185	81/35	60.1	+	+	83/50	+BN	+BN
10	Mifflin	10	80/30	11.0	0	0	80/50	+BN	+BN
11	Chartiers	58	79/29	45.0	+	+	76/31	+BN	+BN
12	Whittier	39	77/41	12.3	0	+	89/47	+BN	+WN
13	Grandview	87	76/25	30.4	+	-	85/32	+BN	+WN
14	Linden	187	75/47	55.7	+	0	76/47	+BN	+BN
15	Beltzhoover	181	75/34	55.0	+	-	70/30	+BN	+BN
16	Miller	207	75/51	99.3	+	+	78/52	+BN	+BN
17	Overbook	81	73/23	30.0	+	+	61/23	+BN	
18	East Hills	243	71/24	55.6	+	-	57/26	+BN	
19	Crescent	359	70/36	99.6	+	+	61/31	+BN	
20	Homewood	69	70/36	58.1	+	+	67/35	+BN	+BN
21	Sunnyside	132	69/37	52.4	-	+	68/34	+BN	+BN
22	Schaeffer	84	69/35	38.6	-	-	68/38	+BN	+BN
23	Manchester	288	66/31	68.7	-	-	68/29	+BN	+BN
24	Minadeo	104	66/25	37.1	+	+	53/25	+BN	
25	McKelvy	220	66/24	99.3	-	+	74/40	+BN	+BN
26	Belmar	306	65/24	98.8	+	+	67/26		+BN
27	Spring Garden	57	63/21	27.4	+	-	70/26		+BN
28	Vann	250	61/27	98.8	-	-	76/35		+BN
29	Northview	222	61/27	64.4	+	+	68/30		+BN

NN = national norms
TQN = top quarter nationally
WN = white norm (PPS: reading = 82%; math = 84%)
BN = black norm (PPS: reading = 66%; math = 65%)

Individual School Plans and the School Improvement Project

In the SIP the first act in beginning the process for narrowing the achievement gap is to create a school profile. See Table 2. It is assumed that all data will be disaggregated by grade and subject. Routines from SIP must be instituted in schools where achievement is low and where school conditions exist similar to those at the Miller School during the 1979–80 school year when Miller was one of the lowest achieving schools in the district. Several routines have been selected to elevate achievement in the PPS. They include the following assessment routines:

- Set goal for school actors and develop consensus around these priorities.
- Construct the profile described in Table 4 (page 109) as baseline data.

- Use all indicators for student placement in reading and math groups.
- Form classes from assessment (student profile).
- Acquire help from reading specialists or other ancillary services for placement verification when questions persist around the assessment.

Table 2

Ranking of Pittsburgh Public Elementary Schools with 75% or More Black Enrollment on California Achievement Tests, April 1986

Name of School	% Black 9/23/85	% at or above NN in Reading/Gains or Losses			% at or above NN in Math/Gains or Losses	
1 Madison	99.0	81	*	+	79	+
2 Vann	99.5	73	+	84	*	+
3 Miller	99.6	72	+	73	+	
4 McKelvy	99.6	69	0	71	-	
5 Crescent	99.8	68	+	60	+	
6 Weil	100.0	64	+	71	+	
7 Belmar	99.0	63	+	64	0	
8 Lemington	99.6	59	-	62	0	
9 Lincoln	97.1	59	+	59	0	
10 Northview	78.0	47	-	53	-	

White norm in reading = 81%; in mathematics = 83%.
Black norm in reading = 64%; in mathematics = 65%.
* Means school reached or exceeded the white norm.
+ Means school gained from previous year.
- Means school lost from previous year.
0 Means school remained the same.

Table 3

Ranking of Pittsburgh Public Elementary Schools with 75% or More Black Enrollment on California Achievement Tests, April 1985

Name of School	% Black 9/24/84	% at or above NN in Reading/Gains or Losses		% at or above NN in Math/Gains or Losses		% at or above NN in Reading/Math, 4/84
1 Madison	98.5	77	-	77	-	80/84
2 McKelvy	100.0	69	+	83 *	+	60/82
3 Vann	99.7	65	-	70	-	75/84
4 Belmar	99.8	61	+	64	-	59/66
5 Lemington	99.6	61	+	62	-	60/69
6 Northview	99.2	56	+	66	+	51/62
7 Miller	100.0	59	+	59	-	57/66
8 Lincoln	98.3	53	-	59	-	61/67
9 Crescent	100.0	50	-	46	-	59/66
10 Weil	99.8	49	0	61	-	49/64

White norm in reading = 79%; in mathematics = 81%.
Black norm in reading = 60%; in mathematics = 63%.
* Means school reached or exceeded the white norm.
+ Means school gained from previous year.
- Means school lost from previous year.
0 Means school remained the same.

Table 4
Data Necessary for Creating a School Profile in the Pittsburgh Public Schools

1. Number of students, percent black, white and other, percent by sex, and number receiving free or reduced lunch
2. Number of teachers, percent black, white and other, percent by sex
3. CAT test scores disaggregated by race and skills
4. MAP scores for reading and mathematics disaggregated by race
5. Levels in reading in previous June, disaggregated by race
6. Teachers' final grade given the previous June, disaggregated by race
7. Number of students failing and percentage of students retained in grade, disaggregated by race and sex
8. Number of students in Scholars' Programs, disaggregated by race and sex
9. Number of students in Special Education, disaggregated by race, sex, and type of program
10. Number of referrals to such programs for the previous school year, disaggregated by race
11. Student attendance for previous year, disaggregated by race
12. Number of and percentage of suspensions, disaggregated by race and sex
13. Number of average students, disaggregated by race and sex
14. Number of student transfers in and out for previous year, disaggregated by race
15. Number of teacher transfers in and out for the previous year, disaggregated by race, sex and seniority
16. Teacher seniority in system and building

Placement Routines

The placement routines require the following activities:

- No grouping in the *Open Court* textbook.
- Not more than two groups in Harcourt Brace Jovanovich textbooks.
- Reading ability as demonstrated by test scores and oral reading determines group.
- Differential scheduling to create flexibility through methods such as cross grouping: a student who needs a skill mastery group not existent in his/her own class can go to another for that skill instruction. Borrowing time from other subjects will occur when more time is needed for skill mastery. Time can be added through means available to instructors (team teaching, large group activities, tutoring, etc.).
- Class record sheets (see Table 5 on page 110) or reading records should be used to test and retest. The criterion score means mastery.
- Standards should be set using 90 percent as the minimal criterion level of competency expected. Number of tests should be specified. Harcourt Brace Jovanovich tests are not sufficient since there are only four periodic tests and one cumulative test. Within content areas and across grade levels criteria should be determined for use as judgments of grades in oral expression and class participation so that everyone knows that a grade in oral expression in one school is judged on the same criteria as that given in another. Grading must be standardized across the curriculum.

Table 5

Information Used by School Improvement Program Participants in the Planning Meeting

I. Pacing sheets were used to identify and make decisions about groups that were:
— too slow — too fast — on target

II. The testing schedule was correlated with the pacing sheets.

III. Class record sheets were correlated with the testing schedule and were used to identify and make decisions about students who:
— met criterion scores (nontargeted students)
— did not meet criterion scores (targeted students)
— exhibited patterns of nonmastery

Class record sheets were also used to:
— identify areas for reteaching
— establish the timeline for retesting
— keep records

IV. Compilation sheets were correlated with placement and test mastery. They were used to identify and make decisions about:
— targeted students with poor grades
— targeted students with passing grades
— nontargeted students with poor grades
— nontargeted students with passing grades

V. MAP data were used to:
— check cross-tabulation for building configuration
— check for appropriate administration of test by levels
— check for number of objectives taught and mastered, taught but not mastered, and mastered but not taught
— look for patterns
— identify upwardly mobile students
— identify targeted students

VI. PRISM observations and PRISM conferences were also used in the planning meetings.

Pacing Routines

These routines are essential for keeping on track and making sure that the students are moving fast enough to make up for any large test score deficiencies. These routines include the following:

- Principals must have written agendas including goals, class record sheets, and standardized criteria for each skill mastery objective.
- When the assessment occurs for each student, the principal and teacher must determine to what degree the student has mastered each sequential skill needed to accelerate achievement in reading and/or mathematics. If a student is at 3.0 in reading and in the fourth grade, for example, the teacher expects that student to grow two years in one so that he/she will be at 5.0 when he/she completes fourth grade.
- Principals and teachers must use class record sheets and cross-correlational data from compilation sheets for each class to identify students targeted as falling behind in pacing.
- Teachers must identify fundamental skill teaching needed for goal achievement and determine the time needed on a daily and weekly basis.

- Differential scheduling and ancillary services must be used to match these needs.
- Teacher-made tests must be used to determine reteaching needs.

Monitoring Routines

These routines are necessary for making sure that the activities designated as important to goal achievement are actually taking place. These require principals to:

- Review long term agendas once a month and meet with teachers who have pacing problems once a month or as often as necessary to accelerate pacing.
- Visit classes formally according to PRISM schedules and informally daily and expect 90 percent student mastery of all skills taught which are observed.
- Trust teacher judgment once teachers have been trained to implement the instructional routines and they are committed to goal achievement.
- Check teacher made tests to determine their compatibility with the curriculum's skill mastery schedule as well as the criteria used by the CAT, MAP, and unit tests in texts.
- Use PRISM conferences and weekly grade-level meetings to report monitoring results to teachers.
- Require lesson plans and review them weekly.
- Review report cards and confer with students in trouble and with their parents.
- Cross-correlate MAP scores with teachers' grades, CAT scores, and curriculum to determine any discrepancies, incompatibilities or omissions.
- Hold grade-level meetings to discuss the flow of data in the building.

Measurement Routines

These routines are necessary in order to know whether or not the goal has been achieved. Teachers must have some means of measuring the skills they have taught in order to know whether or not the students have learned what the teacher has indeed taught. These routines require teachers to:

- Know students' profiles at any given time including CAT scores and identified strengths and weaknesses from tests given once a year; MAP skill mastery progress identifying which skills have been taught and learned and which have not been taught from tests given periodically such as every nine weeks; and results from periodic teacher-made tests and from unit tests given in texts.
- Keep lesson plans and know their learning modalities.
- Know student learning styles and needs.
- Know whether or not a discipline routine works: how the teacher reduces the time spent on discipline so that instructional time is increased for example, or how improvement in student conduct is measured.
- Sample periodically in order to check for testing accuracy.

Discipline Routines

Discipline routines must be established and implemented to deal with behavior problems, to ensure proper school conduct, and to guarantee a positive school climate conducive to learning if high achievement is expected. All school actors play an important part in the operationalization of these routines. They demand that:

- Principals have well-established and published discipline routines known to teachers, parents, and students.
- Principals have well-known consequences for student misconduct which are fairly and justly administered.
- Parents and students are involved in problem-solving approaches to discipline so that motivation is internal instead of external.
- Teachers enforce the routines and teach the problem-solving method.
- Students and parents must be informed of all rules, regulations, and provisions of the discipline routines during the first week of school and any changes from the previous school year should be publicized.
- Conferences must be held with parents of students who are persistent and chronic violators.
- Critical thinking models must be used with all violators.
- Ancillary services must be sought to help these students and parents, and ancillary services should follow an assessment routine.
- Provisions in school must be made for persistent violators so that school work can be continuous and not disrupted, i.e., in-house suspensions and detention.
- Principals must intercede when one actor constantly disrupts the class.

Instructional Routines

The main object of instruction should be to present subject matter effectively according to Jerome Bruner[8] with due regard to structure not coverage. Structure for him meant the underlying principles and concepts which defined a discipline when their basic relationship was understood. He used the following example to explain his position:

> Algebra is a way of arranging knowns and unknowns in equations so that the unknowns are made knowable. The three fundamentals involved in working with these equations are computation, distribution and association. Once a student grasps the ideas embodied by these three fundamentals, he is in a position to recognize wherein new equations to be solved are not new at all, but variants on a familiar theme. Whether the student knows the formal names of these operations is less important for transfer than whether he is able to use them.[9]

The algebra of academic achievement is the use of structure, concepts, and principles (achievement knowns) to discover the unknowns about accelerating growth.

Secondly, Bruner cautions us to remember that any subject can be taught to any child in some honest form if it is taught structurally and tied to the experiences which the learner brings to the situation. He says:

> If one respects the ways of thought of the growing child, if one is courteous enough to translate material into his logical forms and challenging enough to tempt him to advance, then it is possible to introduce him at an early age to the ideas and styles that in later life make an educated man. We might ask, as a criterion for any subject taught in primary school, whether, when fully developed it is worth an adult's knowing and whether having known it as a child makes a person a better adult.[10]

Bruner's point here is that the culture of the child does count. The teacher is expected to know what the child's cultural experiences are and to incorporate them in teaching.

Janice Hale-Benson discusses the importance of this idea in her work. She says that there are actually three components important to a curriculum for African-American children: (1) political/cultural factors (ideology); (2) pedagogical relevance (method); and (3) academic rigor (content).[11] She says such a curriculum must have as its foundation an accurate historical and political analysis of the situation of African-American people in America and the world. Secondly, the teaching methods must show an understanding of the bidialectical needs, relational learning styles, and socialization duality of African-American children as reflected by their history and condition. Lastly, she argues for academic excellence in addition to cultural integration. She notes that African-American children must learn academic rigor in order to achieve excellence.

Lastly, Bruner argues persuasively that intellectual activity anywhere is the same whether in the scientist's laboratory or the primary classroom; therefore, the training of intuition or the ability to generate intellectual hunches or best guesses about the answers to problems must be taught so that school children can master this gift.[12] All of these ideas should be incorporated into the instructional routines for high achieving schools. Instructional routines include:

- Implementing a model which provides for effective instruction, lesson design, supervisory skills for instructional growth, and adult learning theory for effective inservice.
- Spending 90 percent of class time on task.
- Operationalizing a multi-team disciplinary component to assure longitudinal intervention and required modification for at-risk students.
- Instituting a program for the maintenance and development of positive self-images and self-esteem.
- Making provisions for reinforcement routines for keeping students on the mark.
- Using knowledge of the learners' culture and experiential learning baggage.

- Understanding the discipline, its concepts and principles, and knowing how to relate these to the learners' culture and experience.
- Understanding the history of African-Americans.

Staff Development Routines

Because school actors do not know all of the "knowns" in the equation of high academic achievement for African-American children, staff development routines are an imperative. These have the following requirements:

- Superintendents must seek staff development for principals and principals must seek staff development for teachers who have skill needs in the teaching of reading, mathematics, discipline, or subject proficiency.
- Supervisors of principals and principals must provide staff development weekly according to whatever model is selected for this purpose when and where needed.
- Teacher and principal competencies must be utilized in staff development.
- Teacher and principal visitation must be provided so that those who do not have skills can learn from those who do.
- Principals must use grade- and subject-level meetings for staff development in skill mastery techniques, lesson planning, subject competency, effective schools research and any other areas designated as important by school actors.
- Principals and teachers must hold workshops for parents to inform and instruct them about school procedures, routines, and practices.

Evaluation Routines

There has been much discussion around the role of teachers in decision making and evaluation. In fact, some scholars argue that the moderately authoritarian principal so common in effective schools literature is a dinosaur in the face of teacher competency and leadership.[13] Whether African-American schools have special needs requires more study. However, it is clear that teachers must have cause-belief statements about the disparities between African-American student achievement and white student achievement which blame the victim for his/her predicament and absolve the school, teacher, and principal.[14] Schools which are low achieving are so because of what the school actors do in them; therefore, a change in routines is required if there is to be a change in outcome. One of these changes is the evaluation of school actors' performances on the job. The changes are the following:

- Superintendents must make provisions for the assessment and observation of principals. Principal directors (those who know how to narrow the achievement gap) should be assigned to the superintendent for this purpose.
- Conferences must be held once a month with principals requiring assistance to review their execution of the above routines.
- Student achievement must be one factor in the evaluation of teachers and principals.

- Written records must be kept of these conferences.
- The goals in the principal's long-term agenda must be designed to implement board policies and system priorities.
- Principal promotion must be determined by the person's ability to execute these routines and to achieve the school system's goals of high achievement in reading and mathematics and narrowing the achievement gap between African-American and white students.
- Principals must have a model for the evaluation of teachers.
- Conferences must be held once a month with teachers who need assistance to review their execution of routines and their compliance with routine requirements.
- Written observations must be kept according to the model's requirements.
- Criteria for evaluation must be well-known and should derive from school routines, goals, and priorities.
- Teacher promotion and evaluation must be determined by the person's ability to execute the required routines and to achieve the school system's goals of high achievement and narrowing the gap.

Decision-Making Routines

The literature about who should be involved in school decision making is abundant. Recently, in Milwaukee, Wisconsin, there was a proposal for the creation of an inner city district much like the call for community control in Ocean Hill-Brownsville in 1968.[15] This plan's proponents cited four objectives:

- A dramatic increase in students' academic achievement.
- A substantial reduction in the drop-out rate.
- Increased parent and community involvement in the schools.
- Increased excellence through increased parental choice.

Proponents asked the Wisconsin legislature to enact legislation that would create a pilot district composed of one high school, one middle school, and nine elementary schools which serve a student population which is over 90 percent African-American. Critics accused advocates of supporting segregation (although the schools are presently segregated) and asserted that their demand was illegal. Advocates responded as follows:

> Defenders of the status quo have argued that current reforms taking place within the larger school district can eventually produce the results being demanded by reformers.... No proposals for incremental reform have, to date, produced the commitment necessary to educate poor and minority children.... Could opposition have something to do with the transfer of 50 million dollars in state aid which would be allocated for the independent district? Or is the problem simply the unimaginable possibility that poor black parents, with the support of dedicated educators and adequate resources, could manage their own educational affairs?[16]

The attempt at African-American self-determination in public schools serving African-American students has a long, mostly unsuccessful history. Even where African-Americans have dominated, decision-making efforts have been obstructed by a division among the African-Americans themselves.[17]

Efforts to gain more power in decision making by teachers has also been thwarted until recently.[18] Given teacher cause-belief statements about African-American achievement and the disappearance of minority teachers in the ranks, it remains to be seen whether or not this is a good idea for African-American children.

Decision-making routines identified as present in high achieving African-American schools are as follows:

- Principals must seek and acquire data and knowledge which provide a basis for a sound choice of effective instructional routines.
- Principals must share this knowledge with school actors.
- Principals must have routines for receiving and sharing input and feedback from teachers, parents, and students about school problems, issues, goals, and directions.
- Principals must discuss their decisions with teachers, parents, and students and attempt to develop consensus before enforcement and execution.
- Highly controversial decisions must be open to negotiation.
- Principals must have routines for grievances and unsolicited feedback.
- Principals must be flexible, receptive, open, and rational.
- Principals must be responsible for making decisions but should be open to criticism.

Implementing Effective School Routines

The key variable in implementing these routines in low achieving schools is the principal whose cause-belief statements attribute the gap between African-American and white achievement to school routines and societal factors. This kind of reasoning leaves change in the school and society open for analysis and consideration. Several documents are available for school actors interested in embracing these efforts.

A Blueprint for Action II, 1987, developed by The National Conference on Educating Black Children (NCEBC),[19] provides action items and implementation activities for students, teachers, administrators, parents, community, and policymakers. This plan emerged from a broad representative cross section of African-American organizations which met to discuss and respond to these five major groups which impact on the education of African-American children. NCEBC urged communities, their citizens, and their organizations to act on the *Blueprint* and to report the status of their activity to the National Conference which convened at Hunt Valley, Maryland, in 1986, 1987, and 1988.

Another report available to such communities is *Saving the African-American Child*[20] which was developed by a National Task Force appointed by the president of the National Alliance of Black School Educators (NABSE), Donald H. Smith, in 1984. This report makes the goals for academic and cultural excellence clear and does not try to separate education from its cultural imperatives. The following excerpt explains this focus:

> All of this leads us to state as clearly as we possibly can that quality and excellence in education for African-Americans includes: excellence in the "basic skills," as well as in liberal, vocational, economic, political, and spiritual education. But it includes, in addition, excellence in ridding our people of all vestiges of miseducation. This means that we must know ourselves and our condition. This means that the reclamation and restoration of our history and recognition and respect for our rich culture are priorities that are equal in importance to all other priorities.[21]

Both of these documents stress the importance of integrating African-American life and history into the regular curriculum instead of appending it as is presently done in so many places. Since most teachers teach from the textbook instead of the curriculum guide, what is not in the textbook often does not get taught. Therefore, regardless if there is included in the text and/or teachers' guide an abundance of supplementary materials on African-American life and history, teachers tend not to use it.

For example, a textbook, *Latin America*,[22] used in the sixth grade in the PPS was divided into seven parts, a prologue and epilogue and five chapters. There was no index listing for the Olmec culture in Central America nor any mention of the Nubian explorations which scientists now say took place between 700–800 B.C., accounting for the large African heads excavated there.[23] It does admit that Balboa had Africans with him on his great expedition[24] and the authors do state that Africans helped explore Latin America,[25] but there are no names given. On the issue of slavery the authors omit its horrors and soften this African holocaust. Another omission was the participation of the Catholic Church in slavery. Many church leaders were slave holders.

Many distortions appear in this text also. The authors state that some of the soldiers sent to restore French rule to Haiti in 1802 were killed on the battlefield, but many others were wiped out by yellow fever.[26] Actually, more soldiers died on the battlefield than perished from the fever. The authors say that most of the people of Trinidad are blacks and mulattoes while more than a third are of East Indian descent.[27] In fact, 40 percent of the people are of African descent and 40 percent are East Indian.

Respondents who have visited Cuba disagree with the authors' anti-Communist version of its history.[28] Another example of the way the anti-Communist bias of the authors affects their presentation of the facts is the omission of any account of the efforts of Cheddi Jagan who was the main leader in the struggle for the independence of Guyana but who was a Communist. The authors depict Forbes Burnham as the one who led the struggle. Some historians say that he was brought to power by a plot hatched by the Central Intelligence Agency and the British who wanted to oust Jagan.[29]

The racism of the authors, although it may be inadvertent, is shown in several pictures used throughout the text. Balboa's followers are depicted with four natives rowing them down a jungle river on a wooden raft. In the tropic heat (often over 100°) the Spanish stand and sit in full armor while the natives are dressed appropriately in diapers (to be in full dress is civilized).[30] "You know how these folks are!" To show the many different people who live in Latin America the pictures of whites come first and the pictures of Africans last.[31]

Another example of the omission of African-American history and culture from the regular curriculum can be shown by reporting an observation of a sixth-grade science lesson on space exploration in Canton, Ohio, in a predominantly African-American elementary school classified as improving in achievement. While the lesson was good according to Bruner's cognitive requisites and the teacher was dynamic and demanding of his students, there were no pictures of African-American astronauts in the textbook or in the classroom nor was any mention of them made. If African-American history and culture are to be taught, new textbooks must be written that are attentive to the facts as they exist, not as we see them through our capitalist glass, whitely. It may be that the presentation of the true facts of American history may do much to eliminate racism and its recurrent inequities; for then all children, not just African-Americans, will learn about African-American contributions and their struggle for human rights.

The other key factor is the principals' belief in the students' ability to learn and their high expectations for student performance. This factor leads toward the implementation of routines for mediation, reinforcement, and reteaching, and the provision of time for these efforts.[32] The work of the principals of the Charles Rice Elementary School, Maynard Jackson School (4–6), and the Lincoln High School, all in the Dallas Independent School District in Dallas, Texas, is a testimonial to this observation from effective schools research.[33] These principals have the knack for accelerating growth so that students make great spurts in skill mastery once the initial blocking obstacle is removed.

The third most important factor is monitoring student progress. Principals must periodically request data on the progress of students toward their skill mastery goals at something like three or six week intervals. Where students are not keeping pace, interventions need to be considered. Principal-teacher conferences are often held to make these decisions. Additionally, new material needs to be introduced faster in many of these cases. Research shows that there is a great deal of review in second-, seventh-, and eighth-grade mathematics textbooks, for example, and makes a strong argument for the introduction of algebra much earlier than now executed.[34] To achieve acceleration in growth calls for a change in the flow of new material into the mathematics curriculum and a change in the sequence for the presentation of mathematics.

But a knowledge of the cultural experiences of the learner impacts strongly on the ability of the teacher to mediate content when the learner is having difficulty. At the University of Pittsburgh where I teach, some majors in Black Studies have had trouble understanding integers. One student could not master the concept until he understood that negative numbers share the same concept as "behind the eight ball" or "in the hole." The assigned tutor first asked the student whether he understood what owing money meant and told him that he could understand negative numbers if he did. Once an understanding was established, the tutor loaned five dollars to the student, who had no money, and asked him how much money he had. First, the student said, "Five dollars." When the tutor reminded him that that was her five dollars, the student was a bit miffed until he asked, "Can I spend this?" She said that he could. "But I have to pay it back?" The tutor said, "Yes." Then the student said, "So if I spend this, then I am five dollars in the hole, and I now have to find five dollars to pay you back before I get back to having nothing." She said, "You've got it."

Students in kindergarten can learn much more in mathematics if certain concepts are introduced earlier such as adding and infinity. Counting is adding by ones but most teachers do not explain that to their students. Rarely do you find kindergarten teachers who teach the meaning of one. Counting can be taught to African-American children from large families as a family of ones. Imagine a family named Brown with seven children, all with different first names but the same last name; so is the family of numbers, all named ones. One is one one; two are two ones, three are three ones and so on. Every number then is either a multiple of one or a part of one except for zero. This prepares kindergartners for understanding one, adding, and infinity.

In introducing division, teachers often confound African-American students conceptually because they either do not understand the process themselves or do not know how to teach it. When the teacher says 5 "goes into" 25 in a short division problem, she is using an addition concept. The student is taught also that 5 goes into 25 because 5 times 5 is 25. Multiplication is also an addition process. But division is successive subtraction![35]

Lastly, there needs to be more analysis of the language characteristics of bidialectical and bilingual speakers. The argument over the teaching of phonics should be discussed in light of the learner's needs and styles and grounded in empirical hypotheses derived from this knowledge. What does the learner need to know relative to his own language and that of the language to be learned (standard English)?[36] Spanish speaking students come to the standard English lesson with a limited short vowel repertoire. Black English speaking students come with an expanded repertoire. How will the absence or presence of phonics help here? This is the relative question for me, not whether or not standard English should be taught. Teachers in high achieving predominantly African-American elementary schools find that reading textbook series which stress phonics are highly useful.[37] Additionally, bidialectical and bilingual students are always translating and time is required for this process. They are doubly handicapped by this need when taking timed tests, so practice with timed exercises should be plentiful.

Lastly, to be sure, testing is not the aim of education, but tests have become the new lynching tool for the aspirations of African-Americans. Many African-American educators have spent large portions of their professional lives protesting the cultural biases of tests and protesting their nearly universal use to no avail.[38] Today it seems that the way to eliminate tests is to help minority populations to pass them. Then they will no longer fulfill their purpose. Effective high achieving African-American elementary schools are now doing this. Those of us who believe that tests are inimical to the purposes of education should now devote our time to teaching those who want to know how to help African-American students to pass achievement tests. Perhaps in a decade SATs, CATs, MATs, ITBs, and all the other "T" tests will be extinct as we now know them. Tests can then become the diagnostic tools they were meant to be instead of the mechanism for separating winners and losers.

Notes

1. Barbara A. Sizemore, Carlos A. Brossard, and Birney Harrigan, *An Abashing Anomaly: Three High Achieving Predominantly Black Elementary Schools*, NIE, Grant #G-80-0006, January, 1983. See also, Barbara A. Sizemore, "Pitfalls and promises of effective schools research," *The Journal of Negro Education* 54 (1985), pp. 269–288, and "The effective African-American elementary school," in *Schooling in Social Context: Qualitative Studies*, eds. George W. Noblit and William T. Pink, Norwood, NJ: Ablex Publishing Corporation, 1987, pp. 175–202. For information about these schools write to Assistant Superintendent Louise Brennen, Pittsburgh Public Schools, 341 S. Bellefield Street, Pittsburgh, PA 55213.

2. Barbara A. Sizemore, "The Madison School: A turnaround case," *The Journal of Negro Education* 57 (Summer, 1988), pp. 243–266.

3. Karel Holloway, "No pattern revealed in ranking of schools," *The Dallas Morning News* (October 24, 1987), p. A-1.

4. Information on these schools can be obtained from Jerome Harris, former Superintendent of Community School District No. 13, New York City, NY. He is now Superintendent of Schools, Atlanta Public Schools, Atlanta, GA.

5. Sizemore, Brossard, and Harrigan, op. cit. The principal of the Beltzhoover Elementary School in 1980 was Louis A. Venson, director of the SIP in 1988. The principal of the Vann Elementary School from 1968–1993 was Doris Brevard. The principal of the Madison Elementary School in 1980 was Janet Bell who was the principal of the Westwood Elementary School in 1988. The principal of the Madison Elementary School from 1981–1988 was Vivian Williams.

6. SIP was designed to develop and test school improvement strategies in seven low achieving schools. The long range goal was to disseminate effective school improvement strategies developed in this project to schools in the district. The time line for the project was three to five years.

7. PRISM is a staff development effort designed to improve the instructional leadership of administrators, the effectiveness of teachers, and the learning of students. PRISM is an adaptation of Dr. Madeline Hunter's Effective Teaching Model. This includes the four elements of effective instruction, the lesson design for effective instruction, supervisory skills for instructional growth, and adult learning theory for effective inservice. PRISM was initiated during the 1981–1982 school year in Pittsburgh.

MAP is a pre-post instructional testing system designed to increase student achievement in basic skills. The core of the MAP project is the diagnostic testing program. In the MAP plan all teachers of the subject areas involved teach the same basic objectives at each level. A standardized criterion-referenced testing program helps teachers to determine the progress of their students in learning objectives.

8. Jerome Bruner, *The Process of Education* (Cambridge, MA: Harvard University Press, 1960).

9. Ibid., pp. 7–8.

10. Ibid., p. 52.

11. Janice Hale-Benson, *Black Children: Their Roots, Culture and Learning Styles* (Provo, UT: Brigham Young University Press, 1982), pp. 152–158.

12. Bruner, op. cit., p. 14.

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29. Talks with Richard Blackett and Charshee McIntyre.

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32. See Sizemore, "The Madison School," op. cit.

33. For more information regarding these schools contact Nell Lewis, Dallas Independent School District, Dallas, TX.

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Pushing School Reform to a New Edge: The Seven Ironies of School Empowerment

by Carl D. Glickman

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There is a line from a blues classic by Memphis Slim that can aptly be applied to the current rhetoric about school restructuring: "Everybody wants to go to heaven, but nobody wants to die." Heaven can be construed as school empowerment, the decentralization of educational decision making, school-based staff development, and site-based management. Having worked closely for many years with schools engaged in these activities, I'm wary of schoolpeople's impulse to jump on the restructuring bandwagon without assessing their own readiness to take on the pain and to confront the conflicts involved—and without realizing the extraordinary courage necessary to sustain such change.

Let me be clear. I'm a firm believer in the benefits to education of the move from legislative, externally developed regulations to site-based, shared-governance initiatives. But I'm afraid that, if schools move too quickly and without a clear picture of the issues at stake, they will fail to improve education for students. And legislators will perceive that failure as another example of why teachers and schools need to be controlled and monitored more strictly than ever. With decentralization, the stakes are high. Education as a profession has much to gain, but it also have much to lose.

The banner word of the restructuring movement is *empowerment,* and it places the school at the center of inquiry, raising questions about the conventional structures of schooling. There is a headiness to this movement, which

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arose in reaction to the heavy-handed legislative reforms of the past. It has become clear that improving education is more complex than merely finding the correct mix of external rewards and punishments to insure compliance from teachers. Instead, the issue of how educators are treated within their own school walls needs to be resolved if we are to have lasting, significant change in schools. In essence, educators will be given greater latitude over curricular and instructional decisions as long as those decisions recognize the dual objectives of equal access to knowledge for all students and accountability to the public for results.[1]

The time to release ourselves from simplistic and ineffective prescriptions has passed; the time to dream is upon us. How we handle the next three to five years will have grave consequences for the future of public education and for the future of teaching as a profession. As John Gardner noted:

> In times of crises, individuals discover unsuspected strengths and reveal a capacity for bravery, endurance, generosity and loyalty beyond all expectations.... Sometimes capabilities remain hidden simply because the circumstances of life do not evoke them...but sometimes the gifts have been buried by early defeats and harsh treatment, or layered over by cynicism, or held inactive by self-doubt.... The battles we wage...are not just exercises in compassion. They are battles for the release of human talent and energy.[2]

Indeed, this continues to be a time of crisis in public education. The results of the 1989 Gallup/Phi Delta Kappa Poll of the Public's Attitudes Toward the Public Schools indicate that the public is ready for "tradition-shattering change" and is "willing to pay for it through higher taxes."[3] (I'm confident about the public's readiness for the first but less confident about prospects for the second.) Teacher unions and associations, state departments of education, private educational foundations, universities, and many local school districts are responding to the challenge to initiate change by piloting demonstration schools. These schools are being controlled mainly by school professionals with varying input from parents and students. Examples of such experiments are the Schools for the 21st Century in Washington State; the Carnegie Schools in Massachusetts; the schools in Dade County, Florida; the schools in Jefferson County, Kentucky; the National Education Association's Mastery in Learning Project; the Teachers as Leaders Project of the American Federation of Teachers; the Coalition of Essential Schools; the Relearn Network; and two projects that I direct for the University of Georgia—the demonstration schools and the League of Professional Schools.

Almost daily, we read about another district whose school board has approved a decentralized, site-based management plan. Many schools are in the midst of serious restructuring efforts. People are scrambling, trying to define and operationalize the concept of empowerment. In simplified form, the theory of professional empowerment is that, when given collective responsibility to make educational decisions in an information-rich environment, educators will work harder and smarter on behalf of their clients: students and their parents.[4]

But thus far the results of restructuring efforts have been more rhetorical than real. Most schools that have been involved in empowerment reforms don't look much different from schools that have not been involved. And we hear recurrent questions from those standing on the sidelines: Where is the substance of decentralization and empowerment? What is being restructured? How is education for students in these restructured schools any better than it was before?

These are tough questions. I'd like to try to answer them with insights from our own efforts in Georgia and from other, similar efforts at school improvement. Even when we look at documented successes, we discover ironies and vulnerabilities. Therefore, in this article I'd like to address the contradictions of empowerment—not as a critic of empowerment but as a proponent. I truly believe that the movement to improve schools through empowerment may be the last chance in many of our lifetimes to make schools institutions that are worthy of public confidence and professional respect.

University of Georgia Projects

The first project of the University of Georgia's Program for School Improvement (PSI) currently has five demonstration sites. Our demonstration schools have a high percentage of students from low socioeconomic backgrounds. Neither the schools or their districts have surpluses of time or money. Furthermore, the PSI demonstration schools operate in one of the most heavily legislated states in the U.S. We assist these demonstration schools with planning, and we collaborate with them in setting schoolwide instructional goals, in implementing plans, and in conducting research on the effects of their programs on students. All our schools make decisions via a process of shared governance in which teachers and administrators are equals; no individual has veto power over the others.

In the winter of 1989–90 the PSI began a second project, the League of Professional Schools in Georgia. This association is now open to any public school that wishes to participate. We offer planning workshops for school teams of teachers and administrators, an information retrieval system to keep schools up to date on the most recent research and case studies, follow-up meetings for revising plans, conferences to discuss innovations with staff members from other schools, and help in planning action research. We also design methods of evaluation and provide consultation to help schools assess their progress toward their goals. To date, 16 elementary schools, three middle schools, and six high schools have become members of the League of Professional Schools.

In 1983 Oglethorpe County High School began working with the PSI to develop a participatory decision-making process led by teachers at the school.

In the intervening years the school has, among other things, increased instructional time, improved student achievement, and decreased its dropout rate. The efforts to improve the school have resulted in programs that provide students with more personal attention, including an interdisciplinary, team-taught school-within-a-school. By spring 1989 the school had reduced its dropout rate by 50 percent, and the proportion of students who passed the state's test of basic skills had increased from 67 percent to 90 percent.

Another school, Fowler Drive Elementary School in Clarke County, began an arrangement with the University of Georgia in the fall of 1986. The current goal of its professional staff is a total reorganization of the school into what is called the Community of Learners for Advancing Student Success (CLASS). The project involves grouping teachers, students, aides, and parents across grade levels into nuclear and extended families; arranging courses thematically; and offering accelerated language tutorials. Faculty members have participated in staff development activities focused on cognitive monitoring, peer coaching, and whole language. By the end of the 1988–89 school year the school was experiencing an 80% increase in student success rates, gains in teachers' conceptual thinking, and greater internal locus of control among students. The school has received state and national awards for its efforts in language education and staff development.

Morgan County Primary School entered our program in 1988. In 1989 the school set goals to improve the climate of the school, to improve students' self-concepts, and to improve their attitudes toward learning. A task force drew up recommendations that have led to the use of team planning and the establishment of a schoolwide instructional council. Preliminary results over two years have included statistically significant improvements in the climate of the school and a decrease in the number of students in the lowest quartile on tests of achievement.

Clarke County School District has implemented the 21st Century Project, a bold districtwide partnership focused on strategic planning to improve curriculum, instruction, staff development, and program evaluation. Teachers have majority representation on the project's task forces and equal representation with administrators, community members, and university personnel on an overall review board. In 1988–89 the project accomplished the following things: (1) the coordination of social and support services for students and parents, (2) the creation of transitional ninth-grade programs for over-age students, (3) the implementation of staff development programs focusing on integrative language and reading activities, and (4) the establishment of middle school parent/teacher conferences. Task forces are currently turning their attention to special instructional programs, to support services for students and families in all grades, and to the 21st Century Institute, a nontraditional secondary school for students in grades 9 through 12.

Recently, our school projects have undergone several external evaluations, and the findings have been positive. The demonstration sites have shown evidence of positive and significant effects on students and faculty members. So the good news is that, over time, schools can use a process of shared governance to control their own destinies and to reorganize themselves in creative ways to help students and teachers become more successful.

Moreover, the work of these schools is characterized by both high excitement and high anxiety. The results suggest that we're on to something, but there is also the feeling that the floor could fall through at any moment. Even in the high school, where the empowerment operation has been in effect for more than six years, there are no assurances of permanence or stability. We're only as good as we were yesterday, and every day we feel the pressure first to maintain and then to go beyond our current successes.

Such change is not easy. I'm convinced it will never be easy—and that is the rub. Are we willing to work in a world in which uncertainty, rather than routine and habit, is the norm? Can we stand the ambiguity of such a world? Can those of us who are part of the old system consciously help to create a new system? I think we can, but to do so we need to understand what it's like to push school reform to a new edge.

The Seven Ironies

C. Vann Woodward noted that there are deep ironies inherent in major public successes. He wrote, "All these grim and paradoxical sequels to a noble cause will have to be incorporated before our... story [is] brought up to date."[5] I would argue that, where school empowerment is concerned, we must be aware of and manage the "grim and paradoxical sequels" before sustained school success can occur. When a school pushes reform to a new edge, it finds itself looking out over the abyss. I'd like to suggest seven ironies of empowerment that I would speculate come with the territory of a "noble cause."

1. The more an empowered school improves, the more apparent it is that there's more to be improved. In his classic study of effective schools, Wilbur Brookover found that faculty members in schools that were undergoing improvements had a higher level of dissatisfaction with their teaching than faculty members in schools that were not successful and not improving.[6] Brookover's conclusion rings true in every one of the PSI demonstration schools. When teachers are involved as equals with their administrators in setting instructional goals and when those goals come out of an expanded arena of knowledge, then teachers must confront many factors that previously seemed unimportant.

Knowledge can make us dissatisfied with what we are currently doing. When a school examines itself, when it looks hard at what students are and are not learning, when schoolpeople look at their lofty philosophies and goals—and then ask themselves if their resources, their curriculum, and their teaching strategies are consistent with their espoused beliefs—dissatisfaction invariably creeps in. When school people examine the achievement levels of various subpopulations of students, they uncover information that is difficult to handle. Ordinary schools are busy convincing themselves and others of how excellent they are; great schools know that they are not as good as they can be. As schools are empowered to study themselves and begin to achieve success, they become increasingly aware of the awesome challenges still ahead. Eventually, those in an empowered school come to understand that education is a humbling enterprise that can never be perfected.

2. The more an empowered school is recognized for its success, the more non-empowered schools criticize it. When the staff of an individual school takes the lead in redistributing power, plans its own staff development, and spends untold hours organizing instruction and curriculum in new ways, that school is at best tolerated by other schools in the same district. When the school demonstrates evidence of success and gains attention, it often comes under siege. In a moment of public frustration, a superintendent once remarked to his board, "I'll be damned if I'm going to let other schools torpedo this demonstration school. These teachers and administrators have put their blood and guts into their school. What they receive in return is not appreciation but hostility from other schools. This school will lead us out of our educational mess—if only other schools will try to understand rather than criticize what it is doing."

There are at least three ways of explaining this irony. First, hard-working people in schools that are not receiving public recognition may feel some natural jealousy toward a school that is attracting attention. Second, the efforts of one school may call into question the lack of similar efforts in other schools. And third, there are legitimate questions about whether real change occurs in demonstration schools.

Criticism of empowered schools is understandable in light of the first and third explanations. However, I believe that many attacks on innovative schools stem from the second situation: one school's willingness to risk and succeed calls attention to the lack of effort by other schools. Teachers and administrators in the unimproved schools may feel that they are being pressured to change. Individually and collectively, they may not be ready to participate in shared decision making. Since teachers in the same district talk with one another, supervisors might be confronted with such unsettling questions as, "Why are teachers in that school so involved in making decisions while we in our school are not involved at all?" On the other hand, teachers might see the amount of effort that colleagues in the empowered school are expending and worry that they will be forced to increase their own workloads. What they do not understand is that the staffs who are working longer and harder have *chosen* that lot.

When administrators or teachers feel threatened by the efforts of an empowered school, there is a natural tendency to attack; the best defense is a good offense. Although schools that practice empowerment might receive praise for their efforts, they might also be criticized and ostracized. A blessing for many empowered schools is benign neglect.

3. The more an empowered school works collectively, the more individual differences and tensions among the staff members become obvious. If a school wants the faculty to be truly involved in decision making, then tensions and factions that were previously submerged will rise to the surface and have to be dealt with in public arenas. In nonempowered schools, business gets done by giving in to the vocal and the powerful. By playing one side against the other and keeping parts of a problem obscured, an administrator can suppress potentially volatile issues. The strategy of divide and conquer and the exercise of top-down power are the conventional approaches to the issue of school change. With empowerment, tensions become visible, and the opponents see one another clearly. Nel Ward, in an excellent case study of an empowered high school, supports this point. Increased involvement, Ward found, resulted in increased polarization between those faculty members who have developed collegiality and the past leaders.[7]

The notion that a school that uses a process of shared governance is a utopia of people holding hands and dancing through rose petals is quite misleading. Shared governance brings differences to the surface, it gives everyone equal rights and responsibilities to influence schoolwide decisions, and it intensifies ideological debate.

Is it worth it? In the high school that Ward studied, the answer was clearly yes. "Despite the 'frustration and inner turmoil' resulting from a departure from personal comfort zones, teachers expressed intense pleasure..., believing that 'future years will profit from this turbulent one.' One teacher said that she would hate to return to 'the static feeling of the past.'"[8]

4. The more an empowered school becomes a model of success, the less the school becomes a practical model to be imitated by other schools. One of the PSI demonstration schools has developed an exemplary dropout prevention program. Another one has received awards for its school-based staff development program. Some visitors travel thousands of miles to observe these schools. Educators looking for solutions to the problems of their own schools record in detail each subcomponent of our programs. Unfortunately, although the schools are "demonstration" sites, their programs are to a large degree *not exportable*.

People need to understand that these programs work not because they are so meticulously crafted and engineered but because the faculty in these schools will not let them fail. They developed these programs and they are determined to make them work. Why? Simply because the responsibility for the success of the programs lies with them and no one else. They do not wish to be seen as people making stupid decisions!

Therefore, when an empowered school succeeds, it establishes curricular and instructional programs that are unique to its own staff, students, and history. The *process* of how a school came to such decisions is more transferable than the program. I shudder when I think of a superintendent or principal trying to implement in a top-down manner a program developed through grassroots participation. To do so merely repeats the mistakes made with "teacher-proof" curricula. It is only the general notion of informed, representative decision making that can be easily transported. Even the specific decision-making model of a particular school should not be seen as prescriptive.

Across the country, we are now seeing districts and states mandating shared governance. The American tendency to package, simplify, and sell has invaded the empowerment movement. The contradiction should be obvious. If a school's instructional priorities, goals, and actions are to be derived from the collective wisdom of faculty members, then the process of governance must also be derived from their collective wisdom. Mandating a uniform model of decision making for all schools makes a mockery of the notion of professional wisdom. Instead, we need to articulate and define the concept of an empowered school, provide examples of empowered schools, and leave the process and substance of empowerment to each school. Our objective should not be to transfer programs but to develop the knowledge that leads to the full use of professional and collective wisdom.

5. The more a school becomes empowered, the more it hesitates to act. Confidence in one's power is, ironically, often accompanied by wariness about what one proposes to do. It's easier to complain that a school can't be better because of perceived enemies "holding us back" or "not letting us improve" than it is to act when we have the power. The historian William Reid has stated that those who operate within the system often do not try to change it, even though they complain about it.[9] The reason is that they know how they fit into the current operation. They know their status, and they know that their lives are secure. What we complain about today, we complained about yesterday, and we'll complain about tomorrow.

Life is simpler when we have an enemy to circumscribe our actions. Life becomes much more difficult when there is no enemy out there; if there is an enemy in empowered schools, the enemy is ourselves. No one tells us what we can't do; instead they're asking us what we wish to do. The resources aren't infinite, and boundaries still exist, but the message is that it's all right to dream and to act on our dreams. This situation can be frightening.

I vividly remember the case of Fowler Drive Elementary School, which for two years had made small, satisfying changes in teaching methods and staff development. In the third year, the principal asked staff members—experienced in schoolwide decision making—to meet in cross-grade groups and come up with their version of a dream school for students. The teachers eagerly took on the challenge and discussed how they would alter grouping patterns, change grade-level placements, replace basal readers with real books, and revamp remedial programs. Moreover, they talked about how they would change the school from grade-level teams to cross-grade-level families. After several meetings, a committee was formed to develop specific ways to make the dream school a reality.

Unexpectedly, the faculty members began to wonder whether they wanted their dreams to come true. They would be in different classrooms—some had been in the same classrooms for a decade or more. They would use different teaching materials, and they would work with a wider range of students. In effect, each person's life would be changed from the known and the comfortable to the unknown and the less comfortable as the school moved toward its goal. No one was telling the faculty members that they couldn't do it; yet the faculty hesitated between an easy dream and the hard reality of action. For six weeks faculty members reviewed, backpedaled, and hesitated. Finally, when it came time to act, they unanimously agreed to open their dream school in the fall.

Such hesitation is similar to what happens when one steps on the gas pedal of an automobile in order to move into the passing lane. When one puts the pedal to the floor, the auto hesitates for a moment. The driver must decide whether to keep the pedal down and pass or to ease up on the pedal and return to the cruising lane. Empowered schools eventually learn that they have a vehicle for accelerating change; yet with this realization comes the knowledge that they can move at a speed and in a direction that could change lives. Secure roles and routines must be abandoned, and risk will certainly be involved. The hesitancy comes in thinking through the risks, and this hesitancy gives a school a chance to ponder the path it is to take—to dream and then act or to dream, dream, and dream some more.

6. The more an empowered school has to gain, the more it has to lose. It has been my experience that the early stages of a school's efforts at empowerment can bring about immediate, short-term gains for students—perhaps a new staff development program, a change in instructional scheduling, or a bolstering of particular elements of the curriculum. Student attitudes improve, and achievement rises. The changes lead to satisfaction among staff members, but then the pressure increases for the school to become bolder in its innovations and to demonstrate more dramatic student gains and accomplishments. The external pressure to show others can begin to replace the original intent of showing ourselves what "we" can do for "our" students. Public relations and the projection of a positive image of the school can become the overriding concerns. Real and wise changes for students can become less important.

Why does this happen? I think that it is largely because educators have bought the notion that the development of school effectiveness is a linear and a progressive process. To fit what Jean Piaget characterized as the American idea of improvement, a "good" school needs to become better each year than it was the year before. Our students must perform better, accomplish more, participate more, and exhibit more—year after year. The push for short-term yearly gains is one of our downfalls. By always focusing on short-term yearly accomplishments, we trivialize and deny the value of the process of arriving at what is most important, enduring, and significant. Education is a long-term proposition. We can afford false starts, missteps, and ragged progress, and we should anticipate them as we plan for the future.

It is often the case that a school that quickly achieves some indicators of success feels that it must do better the next year. This is a self-destructive myth that we should abandon. No corporation, government, society, community, or school can have an unbroken string of successes. Instead, as in the natural rhythms of life, there are good days and bad days, good years and bad years. Much of our research on effective schools consists of one-year snapshots that tell us nothing about sustained efforts. Even if a school improves on some measures one year, we do not know whether the gains are worth the effort until we see what the following years bring. Similarly, the lack of obvious, immediate signs of improvement for one or two years might be insignificant when the fruits of sustained labor become apparent in the third and fourth years.

What is important to realize is that school success is neither linear nor uniform. Larry Cuban makes the case that, for some schools, just maintaining student accomplishments in times of dramatic upheavals should be interpreted as a sign of success. What we should be striving for is the attainment of those educational goals that are most important for our students and that account for the ebb and flow of purposeful school life. WE should think of schools as communities of students, educators, and parents working together for many years. What should drive the efforts of an empowered school are *patterns* of improved learning. Thus any change in a particular measure of achievement can be explained either as a redirection of energies to more important things or as a signal that revived attention is needed. Over the course of a single year, isolated examples of improve learning often mean little. A short-term gain or drop in any measure is not an indication of success or failure *unless* a school has no long-term goals. Without long-term goals, schools focus on the immediate, the expedient—and, often, the superficial. They succumb to the pressure of mortgaging the future for the present.

7. The more an empowered school resembles a democracy, the more it must justify its own existence to the most vocal proponents of democracy. This irony is a baffling one. Schools that are overtly democratic in their decision making are somehow seen as flawed by individuals who are unwaveringly loyal to democracy in the larger society.

At a state conference of superintendents, the principal of one of the PSI schools explained how his vote on his school's instructional council carries no more weight than the vote of any other member. The school has operated in this fashion for many years with notable instructional success. A highly visible and powerful superintendent asked, "But you *do* have veto power over the council's decisions, don't you?" The principal answered, "No, I have the same vote, the same rights, and the same responsibilities as everyone else." The superintendent was speechless and sat down with a shrug of disbelief.

At another meeting, this time with school principals, the same principal was challenged by another principal, who asked, "Aren't you the legal authority in your school? Aren't you the captain of the ship? How can you be one vote on a council?" Our principal replied, "Yes, I'm the legal authority, but decisions about schoolwide educational improvements are the prerogative of all professional educators. I'll sink or swim based on the decisions of a body of intelligent people." The roomful of participants was stunned that a school principal would operate in such a manner.

I'd like to dwell on this issue of democracy in the schools. I find it easy to explain, yet difficult for many schoolpeople to accept. They seem to be afraid that a school run democratically will be out of control—that bad decisions will be compounded, one after the other, until the school ultimately falls apart. But, to paraphrase Thomas Jefferson, when citizens in a democracy make an unwise decision, the solution is not to abandon democracy but rather to further educate citizens so that they will be wiser in their next decisions.

We citizens of the United States believe that democracy is the proper form of governance to improve society. Indeed, in our constitutional democracy no one individual or office has ultimate control over the will of the governed. The President of the United States, our chief executive officer, does not have absolute veto power. He can use a veto to delay a decision, but that veto can be overridden. We Americans believe so strongly in the rightness of the rule of the governed that we have gone to war on many occasions to defend our democratic way of life when we perceived that it was threatened. We believe that, in a democracy, varying perspectives about the common good result in the best decisions possible. We applaud the democratization of other countries because we believe that government of the people, by the people, and for the people is an expression of human freedom and dignity.

Now, if we believe all of this, let's carry the argument a step further. Public schools are the *only* tax-supported institutions that have as their main purpose the education of students to become citizens of a democratic society. Virtually no one questions that the purpose of schools is to provide an education that is appropriate to a democratic society. Yet we do not make the connection that it is legitimate, correct, and ethical for professional educators in schools to operate according to democratic principles.

Why should a principal of a school have absolute veto power over schoolwide decisions when the President does not have an absolute veto over governmental decisions that affect all of society? Why do we believe that society's decisions should be made through the collective wisdom of the people but that the schools' instructional decisions should be made by principals, central office staffs, and superintendents? Why are we willing to fight to protect our democratic form of government, while we refuse to recognize the same form of government as a legitimate way of operating schools?

I understand why such entities as corporations (whose purpose is profit) and other public institutions, such as the postal service (whose purpose is service), do not need to operate democratically. However, I do not understand how we intend to promote the values of democratic citizenship in our students when our schools are models of authoritarian rule. It is inconsistent to endorse democracy in society but to be skeptical of shared governance in our schools.

Schools that plan to embark on a program of reform based on empowerment need to understand the irony of having to defend the use of a democratic process within a democratic society. The querulous questions should be directed at those schools that operate in a *non*democratic manner. Why should teachers not have equal say with administrators about the professional work of teaching and learning?

Having addressed seven ironies of empowerment, I wish to conclude with what it means to push school reform to a new edge. Those involved in reform based on empowerment must deal with its ultimate effects. A friendly and supportive critic of mine often chides me with the comment that our demonstration schools and our professional schools are focused on the process of school improvement—decision-making procedures for setting goals, developing action plans, and assessing effects—and not on the radical or innovative substance of change. I can point to significant declines in dropout rates, to improved student achievement on tests and writing samples, to higher student promotion rates, and to improved scores of students on measures of self-reliance. Likewise, I can cite significant gains in teachers' critical thinking, an improved school climate, and increased teacher participation. Yet my friend is not impressed with such results. I know that, although our claims are documented, they are not always uniform or consistent. Furthermore, I'm aware that one could cite other, competing explanations for why the schools have improved.

Although there's little doubt that "empowered schools" provide better educational environments than they did before they began the empowerment process, such evidence still does not amount to what my friendly critic refers to as "substantial change." I believe what he has in mind are easily observable, technological changes that would "blow your socks off." Perhaps he is thinking of the latest computer and interactive video instruction, of students traveling to and studying different corners of the community and the world, of old notions of testing being replaced by sophisticated naturalistic assessment, of teachers communicating through electronic bulletin boards, of grade levels gone and letter grades done away with, and of teaching in every classroom that is incessantly inspirational and constantly up to date.

Although some of our schools are breaking out of conventional modes and moving into some of the areas that involve "substantial" changes, to most onlookers they still look like ordinary schools. The students are doing better in these schools, the teachers and administrators take pride in what they've accomplished (and what they've suffered), and there is a stronger sense of community among staff and students. We could have started our restructuring efforts with schools that were already interested in building a capsule simulating a voyage to Mars. Instead, we chose ordinary schools that shared the belief that the most significant structural change for the future of public education would be not the quick adoption of an innovation but a change in the way teachers view their work.

I've written many times about how some of our best and brightest teachers have left the public schools because of their lack of influence in decision making.[10] These teachers became increasingly dissatisfied with their careers because no one was interested in their ideas about ways to improve education. Of course, not all the best and the brightest have left. Many have stayed the course, working under conditions that less self-motivated persons would flee from or resign themselves to.[11] The empowerment movement has put a light back into the eyes of talented, experienced teachers—a light that is clearly visible to intellectually alive young adults who are contemplating education as a career. The empowerment movement sends the message that teaching no longer has to be routinized, isolated, individual, and mindless. Rather, teaching can be a career in which a community of professionals working on behalf of students can engage in critical inquiry and collective dialogue.

In 1776 this nation developed a form of governance based on civil participation—not as a means to a higher end but as an end unto itself. When we watch authoritarian governments in Eastern Europe crumble, to be replaced by more democratic systems of governance, we must recognize that the "substance" of the changes lies in the new order itself, in the ensuing changes in relationships, hierarchies, and power. What remains is the work to fulfill the spirit of the new charter.

So, where empowered schools are concerned, we answer the question of substance in this way: empowered schools are better because of the way that teachers, administrators, and students treat one another. Over time empowered schools will achieve many of their goals. Equally important, the way that people work together in empowered schools is a sign of what is possible for the next generation of students and educators. In the end, education comes down to what happens between teachers and their students. We need to find ways to encourage teachers to combine the latest in research and technology with their own contextual knowledge of students—and from that mixture to make educational decisions for, and ultimately with, their students.

Let me return to my title. We reach a "new edge" through empowerment, site-based management, and shared governance. Standing at this new edge, however, forces us to confront ironies. When students succeed, schools call attention to themselves and can become subject to criticism, which can make them defensive. When students fail, educators can be accused of being incapable of professional thought and then be "legislated" to the point of automation.

The fundamental issue is democracy—how it should function in schools to prepare students for democratic citizenship and what will happen when educators practice democracy to make educational decisions. Democracy is not an efficient mechanism, and at times it produces horrendous decisions. But democracy is the core belief that unites us as a people.

Most critics of public education say that our schools will never change; they suffer from too much inertia, too much bureaucracy, too much tradition, and too much structural control. Certainly our schools are not more bureaucratically and structurally controlled than were the governments of Eastern Europe. Yet those countries created new systems of governance almost overnight.

The empowerment movement in the U.S. has a kinship with the democratization movement across the world. The discontent over the disenfranchisement of educators—at times simmering beneath the surface—has now reached the boiling point. The movement toward restructuring and site-based management could be the key to producing truly literate, educated citizens. If we have enough schools supporting and challenging one another, we just might revolutionize the face of education and leave the school a better place for this and future generations.

Empowered schools will have to contend with contradictions and assist one another as they move along a path characterized by high excitement and high anxiety. But, as the tightrope artist Karl Wallenda said, "Being on the tightrope is living. Everything else is waiting."[12] Many schools and educators have stopped waiting and have taken up the challenge of pushing school reform to the edge. Once there, they face the distinct danger of falling off. But they also know what it is to feel alive.

Notes

1. Carl D. Glickman, *Supervision of Instruction: A Developmental Approach* (Boston: Allyn and Bacon, 1990); and idem, "Open accountability for the '90s: Between the pillars," *Educational Leadership* (April 1990), pp. 38–42.

2. Quote in Deborah Baldwin, "John Gardner, the serious optimist," *Common Cause Magazine* (September/October 1989), p. 37.

3. Parents Network, "Tradition-shattering changes in public schools are favored," *Network News* 15 (1989), p. 11.

4. Carl D. Glickman, "Has Sam and Samantha's time come at last?" *Educational Leadership* (May 1989), pp. 4–9; and idem, *Supervision of Instruction*....

5. Quoted in William Leuchtenburg, "The compliant historian," *The Atlantic* (November 1989), p. 129.

6. Wilbur Brookover et al., *School Social Systems and Students' Achievement: Schools Can Make a Difference* (New York: Praeger, 1979).

7. Nel Ward, "Case study: A high school faculty develops collegiality around the knowledge based on teaching and learning," paper presented at the annual meeting of the American Educational Research Association, San Francisco, March 1989.

8. Ibid., p. 14.

9. William A. Reid, "Institutions and practice: Professional education reports and the language of reform," *Educational Researcher* (November 1987), pp. 10–15.

10. Glickman *Supervision of Instruction*...; and idem, "Has Sam and Samantha's time..."

11. Ron Brandt, "On liberal education for tomorrow's world: A conversation with Douglas Heath," *Educational Leadership* (September 1989), pp. 37–40.

12. Quoted in John R. McCall, *The Provident Principal*, rev. ed. (Chapel Hill, NC: Institute of Government, University of North Carolina, 1988), p. 41. ◀

The Knowledge Base for Educational Productivity[1]

by Herbert J. Walberg

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Introduction

For educational reform to work, it should be guided by an encompassing view of research and practice. Although single studies may be useful in evaluating effective practices, they may be too narrowly focused on one or two practices or confined to peculiar conditions and contexts. Educators need a broad knowledge base from surveys and experiments conducted in the United States and other countries. To contribute to this base, this article summarizes several thousand small-scale psychological experiments on classroom learning and analyses of large-scale national surveys of about 250,000 students in elementary and secondary schools in the United States and other countries.

Achievement Tests as Indicators of Risk and Outcome

A chief concern in education is to better serve "at-risk" students who score relatively poorly on achievement tests in the standard schools subjects. Poor achievement, indeed, was one of the precipitating factors in the bold restructuring of the Chicago Public Schools. It is therefore worthwhile considering the reasons why such objective tests are indicators of risk and its likely consequences.

The chief purpose of schooling is learning, and learning may be reasonably indexed by objective achievement tests in reading, mathematics, science, and other school subjects. Such tests include multiple-choice recognition items, essay, performance or "constructed-response" measures, and both factual and "higher order" questions. Such tests do not reveal all outcomes of schooling, but we have little evidence that students who cannot read, calculate, and think scientifically as revealed by achievement tests are likely to do better on other educationally worthy outcomes. Nor do we have reason to believe that students who haven't mastered civics, English, foreign languages, geography, history, and other subjects are advantaged in other ways.

Even those who demur must admit that groups with ultimate legal responsibility for public education—legislatures and state and local school boards—have widely and increasingly evaluated the outcomes of schooling by means of scores on national or locally designed achievement tests. Before us also is the prospect of a new and vastly expanded National Assessment of Educational Progress that would allow achievement comparisons of states, and better comparisons of districts, schools, and students within states. Whether the educational establishment desires it or not, governors, legislators, citizens, and parents are demanding accountability and achievement comparisons (National Governors' Association, 1986; Walberg and Keefe, 1987).

By achievement-test criteria, nearly all American youth are relatively at risk. The National Commission for Excellence in Education warned us, in *A Nation at Risk* (1983), about the under-performance of U.S. students on achievement tests, but recent data provide an even more grim picture with respect to the subject of mathematics[2] (although other subjects could be cited). Among samples of students at the end of primary school in a dozen countries and two provinces of Canada, U.S. eighth-grade students scored third from the bottom. Among the top five percent of twelfth graders at the end of secondary school, U.S. twelfth graders ranked last among Western countries and Japan[3]; they exceeded only the less economically developed countries in Africa and South America (U.S. Department of Education, 1986, pp. 28–30). So it seems arbitrary to conclude that some fraction of our students, say, only the lower 10 percent or those in continuous poverty are at risk.

Indeed, a common but misleading stereotype holds that only big-city children in enduring poverty are at risk. Actually, poverty in the United States is not concentrated merely in the largest rust-belt cities, and it endures less frequently than commonly thought. In the only fairly recent large-scale longitudinal study of family income and status, Duncan's (1984) analysis of about 5,000 American families showed substantial social mobility. Of families in the top or bottom 20 percent of income in 1971, for example, only about half remained in these classifications in 1978. Between 1969 and 1978, 25 percent of the families fell below official poverty lines in at least one year, but less than three percent remained below in eight or more of the 10 years. Even these persistently poor belied stereotypes: two-thirds lived in the South; one-third were elderly; and only a fifth lived in large cities.

Nor is socioeconomic status (SES) itself a large determinant of how much children learn in school. White (1976) collected 636 correlation coefficients of SES indexes with ability and academic achievement from 101 studies. In White's synthesis, the average correlations of test performance with parent income, occupation level, and education were respectively .31, .20, and .19. The average SES-learning correlation was .25, which suggests that SES accounts on average for about six percent of the variance in learning. These correlations reveal that, although higher SES children outperform lower SES children on average, many lower SES children outperform their middle-class peers. Thus, contrary to great importance given to parental SES by some sociologists, its association with learning is surprisingly weak, and SES appears to constrain learning and social ascendancy far less than many believe. As indicated in subsequent sections of this paper, moreover, many alterable school and home conditions have far more powerful influences than SES on how much children learn.

Nor are other categories particularly helpful in diagnosing risk. Racial, cultural, language, and ethnic classifications of students may be useful to social scientists who wish to characterize groups. But, for psychologists and educators, such classifications can conceal large, educationally decisive variations among individuals within groups. Such classifications, moreover, can lead to arbitrary and misleading categorization, and to stereotyping, or invidious labeling of group members. Most special-education classifications,[4] moreover, may be even worse because they are unreliable, perhaps even scientifically spurious, and also tend toward undeserved permanent classifications and psychological harms (Wang, Reynolds, and Walberg, 1986).

Achievement Test Validity

In the early elementary grades, poor test scores predict subsequent poor achievement, absenteeism, and dropping out better than any other index. Indeed, it has been difficult to find an index that generally adds much accuracy to the risk prediction of such sequelae beyond that already accounted for by relatively poor early achievement.

Achievement test scores are preferable to IQ and other ability tests for reasons best illustrated in an important paper in *Science* by Stevenson, Lee, and Stigler (1986), who studied American, Japanese, and U.S. mathematics elementary school classes. Cross-nationally calibrated IQ tests showed that all three groups were equally able at the start of schooling, but with each year, Asian students drew further ahead in achievement. A small achievement advantage at the end of the first grade grew ever larger so that by fifth grade, the worst Asian class sample exceeded the best American class. This "Matthew effect" of the educationally rich getting richer has been observed in many U.S. studies (Walberg and Tsai, 1983).

The Asian students had a far more rigorous curriculum and worked at a faster pace; they studied far more at school and, with their parents' encouragement, at home, especially those who temporarily fell behind in achievement. In the United States, success was more often attributed to ability; in Asia, to hard work. Like the dangers of racial, ethnic, and special-education classifications, ability tests encourage a belief in educational predestination rather than effort, the amount and quality of instruction, and parental involvement as keys to achievement.

Finally, achievement tests are useful because they immediately and directly detect the student's problems and accomplishments. Since scores vary continuously, students need not be classified as bright or dull; rather each student is seen as located on a continuously ascending scale. If detailed diagnosis is desired, tests may also provide indications of gaps in specific knowledge such as multiplication facts, skills such as sentence combining, or "higher processes" such as self-monitoring ("meta-cognition") in reading. In summary, achievement tests have the advantages of educational and psychological plausibility, accuracy, and validity in risk assessment, and they avoid the expense, time, unreliability, misclassification, and harms of other means of risk assessment. They also provide measures of accomplishment and diagnosis, and concentrate attention on the tangible and reasonably agreed-upon ends of schooling. Given these ends, consider the most effective and productive means.

Effective and Productive Education

A few working definitions may be useful. For the purpose of this paper, effectiveness may be defined as the attainment of educational goals, mainly the maximization of learning in a broad sense. Effectiveness, of course, varies by degrees, and the degrees may be measured by the amounts learned, most often indicated on achievement tests. Efficiency or productivity may be thought of as a ratio of the amount learned (or its value) to the resources consumed or their full costs. Resources include not only financial expenditures on buildings, equipment, and staff, but also the valuable human time and effort of administrators, teachers, parents, and students.

Educators, parents, and students can work longer and harder (National Commission, 1983), but they can also work more productively (Walberg, 1983). Since 1975, my colleagues and I have tried to develop a comprehensive framework for the analysis of productivity and test it out in a variety of classroom studies in the United States and other countries. To this framework and related investigations we now turn.

A Theory of Educational Productivity

In recent years, several scientific breakthroughs have occurred in the analyses of large-scale educational surveys and in the syntheses of thousands of educational research results (see subsequent references for details). These surveys and studies show that nine factors increase learning. Potent, consistent, and widely generalizable, these nine factors fall into the three groups shown in Table 1 (page 141).

Collectively the various studies suggest that the three groups of nine factors are powerful and consistent in influencing learning. Syntheses of about 8,000 studies suggest that these generalizable factors are the chief influences on achievement and, more broadly, cognitive, affective, and behavioral learning. Many aspects of these factors, especially the amount and quality of instruction, can be altered by educators, and these deserve our attention especially in improving educational opportunities for at-risk youth.

Each of the first five factors—prior achievement, development, motivation, and the quantity and quality of instruction—seems necessary for learning in school; without at least a small amount of each, the student can learn little. Large amounts of instruction and high degrees of ability, for example, may count for little if students are unmotivated or instruction is unsuitable.

These first five essential factors, however, are only partly alterable by educators since, for example, the curriculum in terms of lengths of time devoted to various subjects and activities is partly determined by diverse economic, political, and social forces. Ability and motivation, moreover, are influenced by parents, by prior learning, and by students themselves. Thus educators are unlikely to raise achievement substantially by their own efforts alone.

Table 1
Nine Educational Productivity Factors

Student Aptitude

1. **Ability** or preferably **prior achievement** as measured by the usual achievement tests
2. **Development** as indexed by chronological age or stage of maturation
3. **Motivation** or self-concept as indicated by personality tests or the student's willingness to persevere intensively on learning tasks

Instruction

4. The **amount** of time students engage in learning
5. The **quality** of the instructional experience including psychological and curricular aspects

Psychological Environments

6. The "**curriculum of the home**"
7. The **morale** of classroom social group
8. The **peer group** outside school
9. Minimum leisure-time **television** viewing

Of the remaining factors—the psychological climate of the classroom group; enduring affection and academic stimulation from adults at home; and an out-of-school peer group with academic interests, goals, and activities—influence learning in two ways: students learn from them directly, and these factors indirectly benefit learning by raising student ability, motivation, and responsiveness to instruction. In addition, about 10 (not the average of 28) weekly hours of leisure-time television viewing seem optimal for learning, perhaps because more television time displaces homework and other educationally and developmentally constructive activities outside school.

The last four of the psychological factors may directly supplement as well as indirectly influence the essential classroom factors. In either case, the powerful influences of out-of-school factors, especially the home environment, must be considered. The 12 years of 180 six-hour days in elementary and secondary school add up to only about 13 percent of the waking, potentially educative time during the first 18 years of life.

If more of the 87 percent of the student's waking time nominally under the control of parents that is spent outside school were to be spent in academically stimulating conditions in the home and peer group, then the total amount of the student's total learning time might be dramatically raised beyond the 13 percent of the time in conventional American schools.

For instance, the average of 28 hours a week spent viewing television by high school students might usefully be added to the mere four or five weekly hours of homework (Walberg and Shanahan, 1983). Europeans and Japanese believe homework helps learning; empirical results of American research support their belief. But instruction in school can also help—it is a case of "both-and" not "either-or."

Other social factors influence learning in school but are less directly linked to academic learning. For example, class size, financial expenditures per student, and private governance (independent or sectarian in contrast to public control of schools) weakly correlate with learning, especially if the initial abilities of students are considered. Thus, improvements in the more direct and more alterable factors hold the best hope for increasing educational productivity (Walberg and Shanahan, 1983).

More and less productive classes, moreover, may be expected in the same school, and it is somewhat misleading to characterize a whole school or district as effective—just as it is less accurate to characterize an optimal condition of plant growth as the average annual rate of rainfall in a state or farm than the amount of rain and irrigation that reaches the roots of a single plant in a given time period.

The educational productivity theory itself is admittedly over-simplified because learning is clearly affected by school and district characteristics as well as many economic, sociological, and political forces at the school, community, state, and national levels. Yet these characteristics and forces—such as the sex, ethnicity, and socioeconomic status of the student, the size and expenditure levels of schools and districts, and their political and sociological organization—are less alterable in a democratic, pluralistic society; are less consistently and powerfully linked to learning; and appear to operate mainly through the nine factors in the determination of achievement. Thus, the theory is offered not as a threat to those who see the efficacy of other factors but as a friendly, collegial invitation to demonstrate their effects on the nine factors or directly on the outcomes of learning.

The canon of replication, in our view, means that the findings in similarly designed studies should reproduce one another fairly closely. For example, cooperative learning has been implemented in various forms such as those employing smaller and larger groups. It can be and indeed is usually operationally defined in detail in various studies. The question is whether these forms are the same or different in their effects.

To answer these questions, the various implementations or strategies grouped under the same category may be more finely categorized and empirically compared in their effects on learning to see if their magnitudes are the same or different. Usually, simple rather than complicated, detailed classifications serve to summarize the findings; and these relatively simple findings suggest educational implications that are convenient and practical to implement.

If an instructional method has proven itself consistently, then the burden of proof rests on those who claim differential effects. They must show that a method works with one group and not another.

Generalizability means that studies should yield similar results in national and international samples of students of different characteristics such as sex and age, in different subjects such as civics and science, and using different research methods such as surveys, case studies, and experiments (Walberg, 1986). For example, the effects of mastery learning on different students and in different school subjects and grade levels may be estimated to determine the extent of their generality.

What has been empirically found in thousands of studies (Tables 2–5 on pages 143–145) is that generally the results are surprisingly robust. The more powerful factors appear to benefit all students in all conditions, but some students appear to benefit somewhat more than others under some conditions. In addition, some studies report larger effects than the averages given below; others, of course, report smaller effects than the average. Such departures from uniformity are rare, small, and inconsistent; they do not particularly involve urban students, and need not be of concern here. The cited research should be consulted for details.

Table 2
Instructional Quality and Time Effects on Learning

Method	Effect	Size
Reinforcement	1.17	XXXXXXXXXXXX
Acceleration	1.00	XXXXXXXXXX
Reading training	.97	XXXXXXXXXX
Cues and feedback	.97	XXXXXXXXXX
Science mastery	.81	XXXXXXXX
Cooperative programs	.76	XXXXXXXX
Reading experiments	.60	XXXXXX
Adaptive instruction	.45	XXXXX
Tutoring	.40	XXXX
Higher-order questions	.34	XXX
Diagnostic prescription	.33	XXX
Individualized instruction	.32	XXX
New science curricula	.31	XXX
Teacher expectations	.28	XXX
Computer assisted instruction	.24	XX
Sequenced lessons	.24	XX
Advanced organizers	.23	XX
Instructional time	.38	XXXX

Note: The X symbols represent the sizes of effects in tenths of standard deviations.

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Table 3

Home, Peer, Class Morale, and Media Effects

Method	**Effect**	**Size**
Graded homework	.79	XXXXXXXX
Class morale	.60	XXXXXX
Home interventions	.50	XXXXX
Home environment	.37	XXXX
Assigned homework	.28	XXX
Socioeconomic status	.25	XXX
Peer group	.24	XX
Television	-.05	X.

Note: The X symbols represent the sizes of effects in tenths of standard deviations or correlations.

Table 4

Recently Synthesized Sets of Educational Methods and Conditions

Psychological elements of teaching
Methods of teaching
Patterns of teaching
Promotion of learner autonomy
Open education
Instructional systems
Computer-assisted instruction
Student grouping
Social environment
Reading methods
Writing methods
Mathematics methods
Techniques for special populations
Teaching training methods

Adapted from Walberg, 1989.

Table 5

Quotes from *Schools That Work*

Schools

1. Mobilize students, staff, and parents around a vision of a school in which all students can achieve.
2. Create an orderly and safe school environment by setting high standards for discipline and attendance.
3. Help students acquire the habits and attitudes necessary for progress in school and in later life.
4. Provide a challenging academic curriculum.
5. Tailor instructional strategies to the needs of disadvantaged children.
6. Help students with limited English proficiency become proficient and comfortable in the English language—speaking, reading, and writing—as soon as possible.
7. Focus early childhood programs on disadvantaged children to increase their chances for success.
8. Reach out to help parents take part in educating their children.

Parents, Guardians, and Communities

9. Instill in children the values they need to progress in school and throughout life.
10. Demand the best from children and show this concern by supervising children's progress.
11. Get involved with the schools and with children's education outside school.
12. Invest in the education and future success of disadvantaged children.

Local, State, and Federal Government

13. Ensure that education reforms make a difference for disadvantaged students.
14. Give local school officials sufficient authority to act quickly, decisively, and creatively to improve schools, and hold them accountable for results.
15. Assess the results of school practices, paying special attention to the impact of reform on disadvantaged students.
16. Support improved education through supplementary and compensatory programs, leadership, and research.

Specific Effects of Instruction

Experimental and quasi-experimental studies show that particular educational methods are powerful and consistent in influencing learning. Quantitative syntheses of these studies show that some methods are far more effective than others that are common in schools today, and yet they are not necessarily more costly (Walberg and Fowler, 1987). Several of these serve as the basis for the discussion of efficiency, trade-offs, and constraints in this section.

Large Instructional Effects

Of all the systematic methods analyzed, the psychological components of mastery learning rank very high in their effects on educational outcomes: Skinnerian reinforcement and acknowledgement of correct performance has the largest overall average effect. Other features of mastery learning—appropriate instructional cues, continuous engagement of students in lessons, and corrective feedback in cases of student errors—also have very large effects.

What trade-offs or constraints would explain why mastery learning isn't more prevalent? One may be that they require thorough and systematic analysis of curriculum into units of content, as well as frequent diagnosis of student performance. Another is that they require departures from conventional teaching. If the truth is told by tests, moreover, it is obvious that some students already know the material and would require no time, while others may require painful, discouraging amounts of study to attain mastery. Such a classroom state of affairs might be difficult to handle over a long term.

Acceleration programs, ranked second in effect, provide college-level lessons and other advanced activities to elementary and high school students with outstanding scores on difficult selection tests. Students in these programs gain much more than comparable control groups. There seems little doubt that selective admission and acceleration did much for the elite students of the Art Institute of Chicago, Bronx School of Science, City College of New York, Boston Latin School, and the Julliard School of Music.

Lack of widespread acceleration programs today may be partly explained by unwillingness of society to face large differences in student talents, or the preference for equality of results over equality of opportunity. In addition, it is arguable that bright specialists may benefit heterogeneous groups by sparking their interest in advanced work, just as they themselves may have something to gain from them. These are obviously value judgments subject to controversy; and even the facts behind the presumed secondary consequences do not seem well established.

Reading training, ranked third in instructional impact, refers to programs that coach learners in adjusting reading speed and techniques to purposes such as skimming, comprehension, and finding answers to questions. The usual learning criterion in assessing these programs is reader adaptability to purpose and material. Probably more teachers would employ such training techniques if they knew of its powerful and useful effects, and if they themselves were trained to teach it.

Other Large Instructional Effects

Several other instructional programs and methods have large and consistent effects. These include cooperative-team learning in which some autonomy over the means and pace of learning is delegated to students who help each other in small groups. This method probably gains efficiency by allowing more discussion and mutual help within the small group than is possible in whole-class recitations; an extra benefit is that students may acquire social skills in working together as a team in competition with other teams. Teachers may avoid using it because they have been untrained to do so and because it requires more planning than ordinary teaching.

Personalized and adaptive instruction, tutoring, and diagnostic-prescriptive methods also have strong effects. Personalized learning, sometimes called "the Keller Plan," is similar to mastery learning in mainly eliminating lectures and recitations but guiding each student by entry tests and written lessons plus individual help. Adaptive instruction uses similar techniques plus work in small groups and differentiated staffing to increase learning.

Tutoring and lesson prescriptions based on diagnosed individual needs are similar ways to adapt instruction to learners rather than batch-processing them. These related methods may gain their success by helping students to concentrate on the specific goals they individually need to achieve or to gain independence from pervasive classroom seatwork and recitation in groups that may only suit the middle third of the students.

Even though these methods have been well demonstrated in classroom research, they are not necessarily widespread in practice. As in the case of other scientific discoveries, it may take considerable time for superior techniques to become popular in practice, especially when they require extra preparation and uncompensated entrepreneurial work on the part of practitioners.

Moderate Instructional Effects

Although many educators have forgotten the post-Sputnik science and mathematics curricula that were created in the decade after 1957, several syntheses of their evaluations show that they had moderate effects on learning; they had strong comparative effects on modernized content, and students were also able to master traditional content. The use of the innovative curricula declined, however, for many reasons including educators' interpretation of public demands for rigor as demanding elementary "back to basics" and more traditional content and methods (Walberg, 1983). In addition, it seems likely that the "new math" and "new science" are more cognitively demanding than the older methods, and there are shortages of qualified teachers in these areas.

In the last decade, school districts have purchased substantial amounts of hardware and software for computer-aided instruction. Much of the research on its effects has concerned unimaginative drill-and-practice or "page-turning" programs. Still, the assessed effects of computer-assisted instruction appear to be moderately better on average than traditional instruction. Because newer programs and those now being developed adapt to learner interests and abilities, they are likely to show larger effects (Walberg, 1983). Even so, union pressures may keep new moneys flowing into the 80 percent or so of school budgets that goes into salaries rather than capital-intensive investments that have benefitted industries that have grown in productivity.

Recent Findings

Since compiling the above results based on syntheses of about 3,000 studies (Walberg, 1984), a more recent search has been conducted (Walberg, 1990). It resulted in a compilation of about 120 syntheses of more than 8,000 studies. There is insufficient space to comment on these here, but Table 4 indicates the range of instructional approaches. The interested reader may find a technical and popular account of them elsewhere (Fraser, Walberg, Welch, and Hattie, 1987).

Effects of Quantity of Instruction, Curriculum, and Content

Students learn what they do while learning—a tautology to be sure, but one that makes an often forgotten point. French children, for example, learn to speak French as a consequence of exposure to spoken French and practice with their families and other social groups. American children, however, rarely master French because their exposure or language environment, even in a few years of formal courses, is so limited in time and in the demanding standards of the real world. For this reason, most American children would score as mentally retarded on standard French intelligence and highly deficient on achievement tests. The important point is that exposure to content, in formal courses or in natural social settings, determines the substance of what is learned.

By international standards, public education in the United States (and in a few other countries such as Australia, Canada, and the Federal Republic of Germany) is unusual in having no ministry of education. The Constitution makes no mention of education, thus leaving it to the states, which in turn leave varying degrees of discretion in standards and curricula to local school districts. Indeed by delegation, default, or incapacity to monitor classrooms, considerable discretion is left for principals and teachers. Although tradition and grassroots control favor a diversified system, it may have inefficiencies. Differing curricula mean children in a mobile society may skip vital concepts that are taught at different times in different schools or encounter difficulties in transferring old ways of learning to new settings.

Although the content problem remains widely unrecognized, the evidence for it is massive and compelling. The International Association for the Evaluation of Educational Achievement (IEA) first showed compellingly the powerful effects of content exposure on learning. Although such exposure may not vary much within countries, especially those with strong central ministries of education such as France and Japan, it varies widely across countries. The IEA group measured such exposure in various ways such as number of courses, hours of lessons during the year, standards, and test items covered in classes.

These exposure indexes were among the most strong and consistent correlates of learning within and across countries. Even controlled for other productivity factors, such indexes typically yielded significant weights in multiple regressions, and such results were demonstrated in civics, English, and French as foreign languages, literature, mathematics, reading comprehension, and science (Postlethwaite, 1975, 28–29).

U.S. Studies

Within the United States, evaluations of the updated mathematics and science courses (generated by educational and political furor over Sputnik in the 1960s) also showed powerful curriculum effects during the 1970s. The quantitative results of two syntheses showed that students in the new courses averaged better on tests reflecting the new content. The new courses may have also been more pedagogically efficient than the old since students in them more often did better on neutral tests according to the categorization of tests in one review, and not very infrequently worse on tests reflecting traditional content.

The National Assessment of Educational Progress (NAEP) given every few years to elementary and secondary school students in the United States offers further evidence of the powerful effects of content exposure. Although the effects emerge in regression analyses of data at all age levels in reading, social studies, and science (Walberg, 1984), they can be most clearly seen in high school mathematics (Horn and Walberg, 1984) since there is reasonable consensus about the subject matter (for example, trigonometry in contrast to history or literature). On the NAEP mathematics test for 17-year-olds, for example, the scores correlated .63 with the rated rigor of the highest course taken (ranging from consumer mathematics to calculus) and .62 with the number of mathematics courses completed. These correlations probably come close to the upper limit that might be indicated by exposure measures within the ordinary range of variation.

The regression weights for these curriculum exposure indexes were highly significant when controlled for socioeconomic status and most of the psychological productivity factors. But it cannot be inferred, of course, that educators can massively raise achievement by simply mandating higher standards and required courses; teachers and students may lack the ability and motivation for foreign languages, physics, higher mathematics, and other demanding courses. By themselves, higher standards might mean higher dropout rates; low standards, however, debase high school diplomas. Higher standards and rigorous content are likely to work best when the amount of time, homework, the amount and quality of instruction, classroom morale, and parental involvement are simultaneously expanded or instituted.

In any case, because of local control in the United States, children are exposed to widely varying amounts and standards of subject matter. Research on schools and classes often shows small effects because the teachers devote class time to topics omitted from criterion tests. Test performance depends in substantial part on the arbitrary overlap of the content of the test items and, in the short term, the content of the lessons, or, over longer periods, the amount and quality of courses in the subject taken by students.

Content Policies

For these reasons, three efficiencies seem possible in principle. First, a national-, state-, or city-standardized, lock-step curriculum would maximize the achievement of students for which it was best targeted, and it would probably help other students to some extent. It would sacrifice, however, the tradition of local control and professional autonomy. If it were targeted on typical students, moreover, those of lower ability might fall increasingly behind, unless steps were taken to give them extra instruction (as in Japan, especially by families), and high ability students might coast along to meet expectations and achieve less than they otherwise might.

A second possibility is the alignment of curricula, instruction, and tests so that these major components of education are efficiently concentrated on what is most important to learn. Minimum competency testing to ensure basic mastery also tends to accomplish this. The cost of these is possible neglect of students of middle and high ability and equating a minimum with the higher standards that seem necessary in American schools.

A third possibility is to concentrate on the basic, fundamental, or most important subjects—perhaps English, foreign languages, mathematics, science, civics, history, geography, art, music, and physical education. Some educators, however, have argued that vocational courses are needed for employment, that lifestyle courses should be required to compensate for weaknesses in families and society, and that increased diversity and choice may motivate teachers and students. Fundamentalists have asked how such a diversified cafeteria or shopping mall approach can work if schools are doing poorly at the core subjects.

It might be difficult to achieve consensus on these values questions. The costs and benefits are not the same for all who might have an interest in the decisions. Still, it is obvious that states are mandating courses and testing, and some efficiencies may ensue, although they may incur some explicit or implicit trade-offs.

A related problem that may turn out to be acute in Chicago is that the local school councils may develop very distinctive curricula. Although grass-roots school decision making may be good in some respects, students who transfer from one school to another may be handicapped. Large-scale studies show that at-risk students are set back 6 to 18 months in achievement after moving from one school to another with a distinctive curriculum.

Homework and Television

Homework is a useful way to increase instructional time. Homework that is graded or commented upon has three times the effect of socioeconomic status.[5] By comparison, homework that is merely assigned has an effect comparable to socioeconomic status.

In addition, more than about 10 hours per week of leisure-time television viewing, perhaps because it displaces more educationally constructive home activities, has a weak negative or deleterious influence on school learning. Yet students report watching on average 21 hours of television per week and doing only four or five hours of homework. This is not to dismiss television completely; educationally constructive programs such as "Nova" and the news, and critical parent-child discussions of them are likely to help.

Other Ways of Extending Time

Instructional time or curriculum exposure is a general concept; it can and is being extended in a variety of specific ways. Our formerly agrarian nation may have historically required a long summer vacation so that children could help in the fields, but today summer school would be a great advantage to all children, especially those diagnosed as at risk. Pre-schools, and half-day, and full-day kindergartens are being implemented in many states. Some districts are extending the time in school from mid-afternoon through the evening hours; the extra time spent is partly recreational, but partly academic with adult supervision.

Home Environment

School-parent programs to improve academic conditions in the home have an outstanding record of success in promoting achievement. What might be called "the curriculum of the home" is twice as predictive of academic learning as is family socioeconomic status. This curriculum refers to informed parent-child conversations about everyday events, encouragement and discussion of leisure reading, monitoring and joint analysis of television viewing and peer activities, deferral of immediate gratifications to accomplish long-term goals, expressions of affection and interest in the child's academic and other progress as a person, and perhaps, among such unremitting efforts, occasional doses of caprice and serendipity.

Moreover, deliberate, cooperative efforts by parents and educators to modify academic conditions in the home have an outstanding record of success in promoting achievement. In 29 controlled studies of the past decade, 91 percent of the comparisons favored children in such programs over nonparticipant groups. Although the average effect was twice that of socioeconomic status, some programs had effects 10 times as large. Since few of the programs lasted more than a semester, the potential for programs sustained over the years of schooling are great since the programs appear to benefit older as well as younger students (see review by Walberg, 1984).

Home-School Partnerships

Operation Higher Achievement, led by then District 9 Superintendent Albert Briggs, at the Grant School in Chicago's very depressed near west side illustrates what can be done in inner-city public schools with well organized and sustained partnership efforts. A joint school-staff parenting steering committee at Grant initially formulated seven program goals such as "increasing parents' awareness of the reading process" and "improving parent-school-community relations." Seven 10-member staff-parent committees were appointed and met periodically during the summer and school year to plan and guide the accomplishment of each goal. The goals were based in part on a survey of parents that indicated that they desired closer school-parent cooperation, stricter school discipline, and more educational activities conducted in the community for their children.

The committees wrote staff-parent-child contracts to be followed during the school year. Superintendent Briggs, the principal, and teachers signed contracts on educational services to be provided to each child. The parents pledged such things as providing a quiet, well-lit place for study each day; informing themselves about and encouraging the child's progress; and cooperating with teachers on matters of school work, discipline, and attendance. The children also signed improvement pledges. Small business merchants in the community raised funds to provide book exchange fairs and other school activities. Evaluation of this program, along with other research, shows that inner-city children can make middle-class progress in achievement if educators work cooperatively with parents on joint goals.[6]

Although parent-teacher targeted interventions on specific achievement goals show the greatest learning effects, David Williams and others at the Southwest Educational Development Laboratory in Austin, Texas, described other constructive roles for parents in school programs. These roles include the following: audience for the child's work; home tutor; co-learner with the child; school-program supporter; advocate before school boards and other officials; committee member; and paid school-staff worker. Parents view their participation in some of these roles more favorably than do teachers and principals, but all parties agree that there should be more parent involvement than presently exists. The nation, moreover, can ill-afford to let any of these prospectively more productive agents remain a silent partner in solving the problems of at-risk youth.

Effective Schools and Districts

This paper mainly focuses on specific psychological and instructional techniques for directly improving learning within classes and homes. But it is worthwhile mentioning the likely value of initiative carried out at intermediate levels, that is, schools and local districts. Such initiatives may remove constraints, marshall energies, and provide incentives for curriculum, instruction, and other changes.

A variety of such programs for students are described in the March 1987 issue of *Educational Leadership* and the recent U.S. Department of Education's *Schools That Work: Educating Disadvantaged Children* (1987). The quotations from *Schools That Work* in Table 5 (pages 144–145) describe the common characteristics of successful programs. In addition, a content analysis of 179 research reviews from such prominent scholarly publications as the *Review of Educational Research* and the *Annual Review of Sociology* provides information about a wider set of variables—particularly organizational, political, and psychological (Wang, Haertel, and Walberg, 1990).

These sources give considerable insight into ways that schools might be improved and that certainly deserve additional research. At the same time, it should be acknowledged that research in this tradition relies on correlational methods that may lack the rigor of randomized experiments.

Conclusion

Among the most promising practices to improve educational productivity are the following:

- mastery learning practices that emphasize continuous engagement of pupils with appropriate feedback and reinforcement
- acceleration programs that provide improved curricula to able students
- extending the school day, week, and year so that U.S. students receive amounts of instruction comparable to students in other developed countries
- reading training, meta-cognitive instruction, and similar programs that show students how to adapt their learning activities to their purposes and progress
- tutoring, peer teaching, cooperative learning, and team teaching that provide greater adaptability to individual differences among learners than does "whole-class" teaching
- increased "content exposure" of a focused curriculum, preferably following national goals
- regular high-quality homework with synthetic feedback

Some additional and related effective programs to bring out such practices are the following:

- the alignment of curriculum, instruction, and tests to concentrate educational energies on clear goals
- a focused, mastery-based curriculum to prevent curricular wandering and dilution of offerings
- delineation of an "essential" or fundamental set of subjects since the "shopping mall" approach clearly has failed
- home-school partnerships to help families make their activities more educationally stimulating and supportive, and to curb excessive television viewing

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Notes

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2. Mathematics and, to a lesser extent, science are the most internationally-comparable subjects. The content of other subjects such as civics, history, and foreign languages is less well defined and uniform across countries.

3. Japanese rates of youth suicide 1984 were about half the U.S. rates and had been declining, as U.S. rates had been rising in the previous decade (U.S. Department of Education, 1987, p. 89).

4. Excepting such physical or physiological classifications as deafness, blindness, and orthopedic handicaps.

5. That is a one-standard deviation rise in socioeconomic status.

6. The Academic Development Institute operates a splendid program in about 100 of the Chicago Public Schools. ◀

Effective Schools Projects and School-Based Management

by Barbara O. Taylor and Daniel U. Levine

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The clarion call to adopt school-based management is now heard throughout the land. Yet, as Sharon Conley and Samuel Bacharach pointed out in the March 1990 *Phi Delta Kappan*, school-based management is not a school reform program in and of itself.[1] School-based management is only one way to restructure decision making and planning at the school site so that day-to-day administration and teaching can be collaborative and collegial. Without a reason for switching to school-based management—a reason that incorporates a stated district and school mission—this change in planning and reporting arrangements is likely to be only a cosmetic attempt to improve the school, as Conley and Bacharach suggest.

Even Conley and Bacharach's overriding goal of creating a professional work environment, while necessary for school improvement, is not sufficient. Without a comprehensive improvement process that restructures *district-level* as well as *school-level* communication, reporting, student monitoring, and evaluation systems in accordance with an agreed-upon, clearly stated district and school mission, school-site management will at the very least cause confusion and frustration on the part of those involved in setting priorities and could end up doing little to promote school improvement.

The research on effective schools can provide direction for decentralized planning and school-site decision making. An effective schools process supplies district- and school-level personnel with an overarching mission: teaching and learning for all children. This mission can be stated clearly and put into practice at both the district and school levels; it is also broad enough to encompass lesser program goals and priorities, such as specific curricular initiatives.

The concept of school-based management developed coincidentally with

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the effective schools model for school improvement. Educators attempting to implement school-based management have often held the goals of the effective schools process at least implicitly in mind. Those practitioners attempting to implement an effective schools model for school improvement have usually formed school councils and trained teachers and principals in techniques of collaborative decision making at the beginning of their programs.

History of School-Based Decision Making

This article builds directly on Conley and Bacharach's work, which we believe is an excellent exposition of the state of school-based management today. A bit of history is in order here, however. The idea of placing authority to make day-to-day decisions at the school site is not new. The earliest multi-classroom schools were "managed" by teachers and a principal teacher, who were generally unmarried women able to meet with one another before and after school to administer the school and discuss its educational program.

After World War II and until the late Sixties, when the proliferation of school administrators and the growth of teacher unions placed the two groups in conflict with one another, school-site decision making became cursory and was often done "in the halls" or through quick meetings between the principal and the staff. The principal "handed down" district policies and procedures to the teachers, who were then expected to carry them out. Authority in the schools became more and more centralized and bureaucratized.

The next round of "school-based management" came about as a result of the school improvement program known as Individually Guided Education (IGE), pioneered by Herbert Klausmeier and a team of educators at the University of Wisconsin, Madison. As they began to implement their program, they realized that day-to-day decision making had to take place at the school site and must involve teachers. In 1965 Klausmeier and his colleagues began setting up "research and instruction" units in schools to work on curriculum development, to refine instructional techniques, and to carry out student evaluation. Two years later most of the schools piloting IGE programs naturally included the principal in their research and instruction units, which allowed for greater coordination of effort and better communication within the school and between the school and the district office.

However, in order to change the curriculum and adjust to the demands of designing individual education plans for each student, teachers needed time, a place in which to work, and channels through which to communicate. The field of education learned through experience with IGE that the school itself could not sustain school improvement without district support and that, to function efficiently for the benefit of all constituencies, the school team had to include the principal. The reform effort had to be both *top down* and *bottom up*.

In the early Seventies educators began to implement forms of school-based management in an effort to respond to the changing characteristics of the neighborhoods and communities they served. What had been solid, middle-class, non-minority neighborhoods had become racially mixed. Neighborhood schools were giving way to desegregated schools to which students were bused. The problem of "white flight" then focused attention on the need to improve schools that enrolled large numbers of black and Hispanic children and children of the "underclass."

In suburban and rural communities the concept of school-based management either didn't take hold as soon or had already been employed as a tried-and-true management practice for running good schools. Florida mandated that an annual plan be drawn up by school-based management teams. Legislated in 1972 and funded and implemented in 1974, the Florida mandate did little, however, to decentralize decision making or to encourage serious programs of school improvement. Florida schools had only to write an annual report and specify their yearly goals and objectives; it was not necessary to state an overriding mission that could be operationalized.

What was needed in addition to a new governance system was a reason for decentralized decision making, and in the early Eighties school-based management and effective schools research began to coalesce in the pragmatic plans of many educators interested in improving schools for all children. Indeed, since many advocates of effective schools were unwilling to wait for a few unusually successful schools to emerge haphazardly from the unplanned efforts of a few exceptional principals, they faced the challenge of finding other approaches to enhance the effectiveness of a group of "normal" schools.

One of the main achievements of unusually effective principals is their success in soliciting faculty input regarding instructional decision making[2] and in developing and maintaining faculty motivation to improve instruction. In addition, some research on change in schools and in other organizations points to participation in decision making as a key variable in developing motivation and commitment among staff members.[3] Recognizing these considerations, advocates of effective schools have emphasized the involvement of faculty members in the preparation and implementation of site-level improvement plans as an important way to help large numbers of schools to move toward greater effectiveness.[4]

At the same time, public education as a whole has entered a period of change and experimentation in which there is a widespread and growing endorsement of increased teacher participation in site-level planning and in the implementation of fundamental reforms. Proposals for and experimentation with such reforms vary widely, from relatively modest arrangements that involve teachers in planning somewhat marginal changes to radical efforts that give teachers sole responsibility for redesigning almost everything in their schools. We cannot provide a comprehensive analysis of such proposals and experiments here, but, since issues posed by this national trend toward greater teacher participation are also important concerns in the effective schools movement, we will briefly discuss several issues that have particular salience for effective schools projects.

Improving School Effectiveness Through Site-Based Management

Unfortunately, little research has been done to help identify the roles that should be assigned to principals and teachers in carrying out school effectiveness projects or other instructional improvement efforts.[5] Most effective schools projects use some kind of decision-making committee or cabinet that includes the principal and elected or appointed teacher representatives.[6] Frequently, parents, representatives of the community and/or external organizations, and students (at the secondary level) are also included.[7] In formulating and carrying out an improvement plan, such committees seem to us to be useful—perhaps even indispensable, in some cases.

However, we do not believe that it is currently possible to specify how large a planning group should be, how it should operate, and whether or how it should try to involve the entire faculty in regular votes, in membership on subcommittees, or in other ways. We also believe that it is not now possible to formulate universal guidelines for distributing decision-making authority between administrators and teachers. Any guidelines we might offer would necessarily vary a great deal from district to district and from school to school, in accordance with the organizational culture, the people involved and their recent experience, and the working environment.

Several other kinds of conclusions are eminently defensible. First, schools bent on improvement face a real dilemma in seeking to provide teachers with more decision-making authority, while research clearly underlines the importance of administrative action and initiative in improving school effectiveness.[8] This dilemma cannot be resolved successfully by a reliance on flip ideological claims to the effect that empowering teachers will "somehow" transform them into members of a cohesive faculty committed in practice to the extremely difficult work of reforming schools. Although decision making in organizations is not a zero-sum game in which greater teacher participation necessarily reduces the power of administrators,[9] simplistic movement toward teacher empowerment will not in itself do much to improve school effectiveness.[10] Schools must develop "balanced" authority relationships through which leadership and support from the central office and the principal help execute decisions reached through the empowerment of teachers, while teachers' initiatives simultaneously enhance administrators' efforts to attain educational goals.

Second, from some points of view, the many actions required to make schools more effective may run counter to teachers' desires or their self-perceived interests. For example, substantial improvement is likely to require additional time and effort outside the working day, the acquisition of new instructional techniques will be a painful task for many teachers, and the delivery of active and enriched learning that focuses on higher-order skills necessitates a reduced emphasis on skills that are most easily taught. We agree that this argument can—and perhaps should—be turned around. That is, these "hardships" of change make teacher participation in decision making a prerequisite for gaining their commitment to change. But the potential for teachers' perceived self-interest to work against efforts to change schools suggests caution in increasing teacher participation and empowerment.

Third, the success of efforts to involve teachers in decision making as part of effective schools projects depends on the provision of appropriate training and related technical assistance for both teachers and administrators.[11] One approach to providing training and related technical assistance for faculty members engaged in planning for school improvement has been described by Susan Everson and her colleagues,[12] who portrayed the implementation of a planning process developed and implemented successfully by the Mid-continent Regional Educational Laboratory (McREL). The McREL approach involves the establishment of a school leadership team with no more than nine members. Initially, four full-day workshops for team members are spaced four to six days apart, and participating administrators also attend four half-day sessions. Much of the activity in these workshops involves the analysis of data on the performance of students, teachers, and administrators at participating schools.

Fourth, technical assistance, training, and encouragement provided to schools participating in school-based management projects may accomplish little unless substantial amounts of time are provided so that faculties can develop and monitor both their planning procedures and their action plans for change.[13] Lack of time allocated for participation can lead to what William Firestone and Dickson Corbett have called "mock" participation.[14] A discretionary fund should also be available so that planning committees and entire faculties participating in school effectiveness projects can acquire training and experience in aligning and realigning resources and educational goals and can move quickly to initiate significant changes in instructional programming.[15]

Finally, one of the most promising aspects of recent efforts to encourage teacher participation in decision making and the empowerment of school faculties involves the granting of waivers that allow a school to overcome restrictions (real or imagined) imposed by federal, state, and local regulations and policies or by contracts negotiated by school boards and teacher unions. Both the National Education Association and the American Federation of Teachers have approved bargaining procedures that will permit certain contract provisions to be suspended temporarily during school improvement programs.

Robert Collins has reported that 14 schools in the empowerment project in Dade County have received permission to waive specified regulations or policies as part of larger, site-level planning efforts designed to improve their educational programs.[16] The use of waivers may ultimately be most productive as part of a system of "conditional deregulation," wherein ineffective schools receive technical assistance and other resources and are given greater flexibility in working to meet specified improvement targets. Schools that remain ineffective after seven years might then be "reconstituted" through changes of leadership and staff.[17] Development of such waiver policies may well play an important part in implementing effective schools projects in the future.

However, developing isolated policies to waive unproductive regulations or to introduce other empowerment strategies or school-based management approaches should not be confused with the effective schools movement or with other research-based efforts to bring about systematic improvement in elementary and secondary schools.[18] For one thing, a well-designed effective schools project has a significant likelihood of success because it reflects two decades of research, whereas most approaches to teacher empowerment and school-based management are still in their infancy. Years of experimentation and research probably will be required before these school-based management approaches stressing waivers or other alternatives for empowering teachers can be expected to bring about widespread and substantial improvement in instruction and achievement.

In our view, U.S. public schools should not forsake the strong possibilities for improvement that can be gained through applying the findings of effective schools research in exchange for pursuing uncertain—and perhaps unattainable—goals associated with recent experiments in teacher empowerment and self-governance. Schools should continue to pursue the possibilities offered by these newer ideas for school improvement. But such possibilities should not be treated as substitutes for systematic programs to improve elementary and secondary schools through the application of knowledge and strategies for school improvement that have the backing of several decades of research and practice. School-based management can be an important component of school improvement projects. By itself, however, it does not provide a comprehensive model for bringing about fundamental reform in elementary and secondary schools.

Notes

1. Sharon C. Conley and Samuel B. Bacharach, "From school-site management to participatory school-site management," *Phi Delta Kappan* (March 1990), pp. 539–544.

2. Seymour Fliegel, "Practices that improve academic performance at an inner-city school," *Phi Delta Kappan* (February 1971), pp. 341–343; Richard Lonoff, "Supervisory practices that promote academic achievement in a New York City school," *Phi Delta Kappan* (February 1971), pp. 338–340; Willard R. Duckett et al., *Why Do Some Urban Schools Succeed?* (Bloomington, IN: Phi Delta Kappa, 1980); Shirley Crite Jackson, "Instructional leadership behaviors that characterize schools that are effective for low socioeconomic urban black students," doctoral dissertation, Catholic University, 1982; and Barbara O. Taylor, "Implementing what works: Elementary principals and school improvement programs," doctoral dissertation, Northwestern University, 1984.

3. Stewart C. Purkey and Marshall W. Smith, "Effective schools—A review," *Elementary School Journal* (March 1983), pp. 427–452; and Barbara O. Taylor, "Metasensemaking: How effective principals accomplish school improvement," paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1986.

4. Lawrence W. Lezotte and Beverly A. Bancroft, "Growing use of the effective schools model for school improvement," *Educational Leadership* (March 1985), pp. 23–27; and Robert Sudlow, "Implementing effective schools research in a K–12 suburban district: The Spencerport model," in Barbara O. Taylor, ed., *Case Studies in Effective Schools Research* (Madison, WI: National Center for Effective Schools Research and Development, 1990).

5. Sharon C. Conley, Timothy Schmidle, and Joseph B. Shedd, "Teacher participation in the management of school systems," *Teachers College Record* (Winter 1988), pp. 259–280; Patricia Cloud Dutweiler, *Organizing for Excellence* (Austin, TX: Southwest Educational Development Laboratory, 1988); and Sharon C. Conley, "Who's on first?: School reform, teacher participation, and the decision-making process," paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1989.

6. Anne T. Henderson and Lawrence W. Lezotte, "SBI and effective schools: A perfect match," *Network for Public Schools* (Spring 1988), pp. 1, 3–5.

7. Carl L. Marburger, *One School at a Time* (Columbia, MD: National Committee for Citizens in Education, 1985).

8. Ann Lieberman, "Teachers and principals: Turf, tension, and tasks," *Phi Delta Kappan* (May 1988), pp. 648–653; Conley, op. cit.; Daniel U. Levine and Lawrence W. Lezotte, *Unusually Effective Schools: A Review and Analysis of Research and Practice* (Madison, WI: National Center for Effective Schools Research and Development, 1990); and Joseph Murphy, "Principal instructional leadership," in P.W. Thurston and Linda S. Lotto, eds., *Advances in Educational Leadership* (Greenwich, CT: JAI Press, 1989).

9. Arnold Tannenbaum, *Control in Organizations* (New York: McGraw-Hill, 1968); and Raymond Pecheone and Joan Shoemaker, *An Evaluation of the School Effectiveness Program in Connecticut* (Hartford, CT: Connecticut State Department of Education, 1984).

10. Conley, op. cit.; and John A. Wagner III and Richard Z. Gooding, "Shared influence and organizational behavior: A meta-analysis of situational variables expected to moderate participation-outcome relationships," *Academy of Management Review Journal* (September 1987), pp. 524–541.

11. Robert A. Collins, *Interim Evaluation Report: School-Based Management/Shared Decision Making Project* (Miami: Dade County Public Schools, 1988); Dutweiler, op. cit.; Cynthia R. Harrison, Joellen P. Killion, and James E. Mitchell, "Site-based management: The realities of implementation," *Educational Leadership* (May 1989)), pp. 55–58; and Marianne Strusinski, "The provision of technical support for school-based evaluations: The researcher's perspective," paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1989.

12. Susan Toft Everson et al., "An effective schools program and its results: Initial district, school, teacher, and student outcomes in a participating district," *Journal of Research and Development in Education* (Spring 1986), pp. 35–49.

13. Dutweiler, op. cit.; Jane L. David, "Synthesis of research on school-based management," *Educational Leadership* (May 1989)), pp.45–53; Henderson and Lezotte, op. cit.; John J. Mauriel and Karin M. Lindquist, "School-based management doomed to failure?," paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1989; and Ellen R. Saxl et al., *Project BASICS in the Schools: There for the Long Haul* (New York: Center for Policy Research, 1989).

14. William A. Firestone and H. Dickson Corbett, "Planned organizational change," in Norman J. Boyan, ed., *Handbook of Research on Education* (New York: Longman, 1988), pp. 321–338.

15. David, op. cit.

16. Collins, op. cit.

17. Dale Mann, "Conditional deregulation," unpublished paper, Teachers College, Columbia University, New York, 1989.

18. Harrison, Killion, and Mitchell, op. cit.; and Levine and Lezotte, op. cit. ◀

Creating Effective Schools: Findings and Implications From Research and Practice

by Daniel U. Levine

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Numerous studies bearing on school effectiveness were produced in the 1970s and 1980s, and innumerable schools and districts have initiated more or less systematic efforts to draw on this literature in working to improve the effectiveness of their educational programs. Thus the end of the 1980s was an opportune moment for the National Center for Effective Schools Research and Development to assess the available materials that deal with the characteristics of unusually effective schools and with approaches that educators are using to promote school improvement.

The resulting document, a lengthy monograph titled *Unusually Effective Schools: A Review and Analysis of Research and Practice*, was published in the spring of 1990.[1] Since I cannot summarize all sections of that monograph in this article, I will present and discuss some of the highlights and major conclusions from the section on using the results of research in multischool projects to create more effective schools.

Before proceeding to discuss considerations involved in successfully enhancing the effectiveness of groups of schools on a planned and systematic basis, I should acknowledge that, prior to the 1980s, most of the unusually effective schools that those of us who work with the national center had encountered in person or had seen described in the literature were isolated institutions. They had become unusually effective largely on their own, with little or no external assistance and without benefit of an effective schools "project." Before the 1980s, most unusually effective schools evolved from the dedicated but groping efforts of a principal, of some other leader, or of a small group of leaders.[2]

Many schools that have participated in effective schools projects or similar school improvement programs have failed to register substantial and lasting gains in student achievement or other indicators of student performance. But many other schools have improved substantially while participating in effective schools projects that were implemented well and that seriously and comprehensively addressed the major aspects of school effectiveness.[3] Much has been and is being learned about ways to enhance the effectiveness of multischool projects. Below, I review some of the most important guidelines that have emerged from systematic districtwide efforts to enhance the effectiveness of groups of schools participating in significant improvement projects.

1. Substantial staff development time must be provided for participating faculties, at least part of this time during the regular teacher workday. Staff development must be an integral and ongoing activity in projects designed to make schools more effective. Moreover, teachers' acquisition and subsequent use of new instructional approaches require considerable time and practice, including coaching when they return to their classrooms. The large amount of time required to equip teachers with more effective methods of teaching comprehension has been underlined by Ruth Kurth and Linda Stromberg, who worked with a small group of teachers to promote more independent reading in a suburban elementary school and found that success depended on "continuous, almost Herculean" staff development efforts.[4] School districts that have made progress in effective schools projects involving more than one school have used a variety of approaches for delivering staff development:

- stipends for inservice training conducted after school, on Saturday, or during the summer[5]
- establishment of a team of experienced substitute teachers in order to release all or part of a faculty for sustained staff development during the school day
- extension of the work year for teachers and administrators to allow more time for planning and for staff and organizational development
- provision of a full-time staff developer at the building level and designation of an assistant principal with particular responsibility for reading and language arts[6]
- operation of a district center for inservice training that groups of teachers can attend for one or more weeks at a time
- creation of "early closing days," when the student day is shortened in order to provide time for staff development and related effective schools activities[7]
- "early dismissal" of students during the last week of school to provide more time for staff and organizational development[8]
- reduction of teachers' duty periods to provide time for staff development and collaboration during the regular school day[9]
- provision of a full-time reading specialist to work with high school faculty members released from planning and/or duty periods through the assignment of substitutes.[10]

2. Faculties engaged in effective schools projects must not wait very long before beginning to address issues involving the improvement of

instruction. Faculties should place some stress on general climate, academic focus, orderly environment, and related correlates of school effectiveness, for they will almost always need some attention. Unfortunately, some faculties participating in effective schools projects tend to fixate on climate, parent involvement, and other correlates that do not directly involve instruction[11] perhaps in part because instructional items are more difficult to address, involve fundamental issues of philosophy and values, and tend to require more resources than do climate improvements.[12] In addition, substantial change in instruction frequently requires departures from district or state policies and regulations.

3. **Faculties embarking on effective schools projects must avoid getting bogged down in elaborate schemes to train all staff members in the details of a particular instructional technique or approach at the beginning of the project.** This guideline is of great importance for three reasons. First, during the critical initial stages of a project, significant attention must be given to the larger effective schools framework and to the set of correlates. Second, intensive training in a new instructional approach will frequently preoccupy the teachers and drain their mental and physical energy. Third, imposing a particular instructional approach, such as cooperative learning or a specific lesson-delivery sequence, early in a project frequently results in mindless implementation that tends to discredit the reform.

Instead, during the first year, considerable time and effort should be devoted to general awareness and to key effective schools correlates involving expectations and requirements for students; grouping arrangements; alignment of curriculum, instruction, and testing; availability of instructional materials; and other prerequisites for success in implementing instructional techniques.[13] Lynn Benore saw the need for this guideline after participating in a multidistrict effective schools project in Michigan:

> Though effective-teaching training models are important in building instructional leadership skills, start the program with a framework of Effective Schools research. After the SI [school improvement] team has written the improvement plan, effective-instruction training can be added as a strategy within the plan. Attempting to introduce Effective Schools and effective-teaching research simultaneously proved confusing and too overwhelming for most participants in earlier projects.[14]

4. **Improvement goals must be sharply focused to avoid overloading teachers and schools.** One of the most common reasons that effective schools projects fail is that they try to do too much in too short a time.[15] This is especially true when staff development, curriculum development, and other resources are limited (as they almost always are). But the problem of overload is present even when resources are substantial. Indeed, in some cases, an abundance of resources contributes to the problem by encouraging school officials to undertake too much at once. One common example of counter-

productive overload involves school improvement projects in which faculties of inner-city elementary schools are expected to improve instruction in reading, language arts, math, science, and social studies—all in one year.[16]

Overload of faculties participating in effective schools projects is but one instance of a widespread national and perhaps international tendency to expect teachers to improve all aspects of instruction almost immediately. Success in an effective schools project may sometimes depend on bringing about an "organized abandonment"[17] of existing activities that are fragmented and incoherent.

5. Significant technical assistance must be made available to faculties participating in effective schools projects. Technical assistance, primarily in the form of specialized personnel, is critically important in helping faculties assess their current problems and current levels of effectiveness, develop the capacity to work together productively, and initiate and carry out significant changes in educational programming and delivery. Depending on the nature, history, scope, and origins of a given effective schools project, technical assistance may involve specialists from the state department of education or from the district office, other external consultants, or in-school staff members.[18]

Terry Clark and Dennis McCarthy and Tina Kelley and Robin Willner have described arrangements for technical assistance in New York City projects that sometimes required a facilitator in each school for the equivalent of one day a week or more.[19] Bill Groom portrayed a successful big-city project in which three full-time staff members, external resource people, and a full-time instructional specialist were available to each of 18 elementary schools participating in an effective schools project.[20] Henry Kopple's assessment of school improvement efforts in Philadelphia concluded that a facilitator must be present in the school at least one day a week for several years.[21] John Murphy and Louis Waynant described this kind of arrangement for a project involving the predominantly black elementary schools in a large suburban district.[22]

As is true of other considerations discussed above, the requirements for substantial technical assistance to carry out effective schools projects are like those essential for the success of any significant school improvement project.[23] Part of the reason that technical assistance and large amounts of staff development time are so important is that true school effectiveness is increasingly defined in terms of improvement in students' comprehension and other higher-order skills.[24] On the one hand, recently developed instructional methods for improving comprehension have been sufficiently impressive to constitute a virtual "revolution" in educators' capacity for attaining this goal.[25] On the other hand, there is "essentially nothing in instructional materials or in teacher training [until very recently] that helps the teacher learn what to do when the child does not understand."[26] One result of this discrepancy is that teachers in most schools will require a good deal of assistance of various kinds in order to enhance the effectiveness of their instruction.

6. Effective schools programs should be "data-driven" in the sense that appropriate information should be collected and used to guide participants in preparing and carrying out plans for improvement. Faculty members in effective schools projects should be sure to focus on discrepancies between economically advantaged and less-advantaged students in acquiring key learning skills, particularly those involving higher-order learning. It is important to disaggregate data in order to compare the achievement of middle-class and working-class students.[27] School-level analysis of such data not only provides a basis for designing pertinent improvement efforts but also calls attention to the educational outcomes that school- and district-level personnel consider important.[28] The centrality of data in implementing effective schools projects has been highlighted by Thomas Kelly of the New York Education Department Metro Effective Schools Consortium in New York:

> Clear data make it possible for a diverse group of individuals to come to consensus. Schools are inherently complex organizations. Each staff is made up of individuals with different personal histories and backgrounds, values, and beliefs. Progress occurs when everyone pulls in the same direction. Real positive and lasting change in an organization comes about on the basis of commitment, not authority. Clear data can enable a school to get such commitment to needed change. It can lead to consensus.[29]

7. Effective schools projects must avoid reliance on bureaucratic processes that stress forms and checklists, as well as on mandated components rigidly applied in participating schools and classrooms. Among the best-established findings of research dealing with significant school improvement efforts are the conclusions that scope must be allowed to adapt a proposed change in curriculum or instruction to the context of participating schools and classrooms; that assistance should be provided through the efforts of informed individuals, not through bureaucratic checklists and regulations; and that identifying and solving practical problems in implementation depend on participants' personal knowledge and understanding of complex realities more than on impersonal mechanisms of control that are convenient for high-level decision makers.[30]

"Technoholic" approaches that attempt to impose improvement through comprehensive, linear programming, and supervision are no more likely to work well in schools than in other types of organizations.[31] Effective schools projects are no exception. Research on the correlates of school effectiveness has identified specific program components that should receive attention in preparing a potentially successful improvement plan. But research has not produced a list of characteristics that can be improved mainly through supervisors' rating them as adequate or inadequate on an evaluation form.[32]

8. Effective schools projects should seek out and consider using materials, methods, and approaches that have been successful in schools

and projects elsewhere. Improving school effectiveness is a difficult undertaking, and faculties of participating schools cannot be expected to reinvent the process entirely on their own. Approaches developed in other locales seldom can be imported successfully without considerable adaptation, and "packaged" approaches for initiating change or improving instruction are dangerous if they are introduced as a substitute for the hard work required to bring about significant improvement. Nevertheless, effective schools projects can be greatly enhanced when participants judiciously consider and adapt appropriate practices developed and successfully implemented in other locations.[33] "Creative swiping," in Tom Peters' terminology, should replace the "not invented here" syndrome.[34]

Examples of approaches that should be considered for many or most projects include the following: use of TESA (Teacher Expectations and Student Achievement) training early in a project to sensitize teachers and help develop their skills in reaching low achievers; use of "effective teaching" approaches for systematizing the lesson delivery of teachers who may be weak in this area; use of curriculum materials designed specifically to develop students' comprehension skills; use of approaches for involving parents and other community representatives; use of instruments, such as the Degrees of Reading Power test, which are designed to help in planning and delivering instruction focused on improvement in students' comprehension; and use of team-learning arrangements that help engage students more actively in learning.[35] Additional approaches that have shown considerable utility when adapted to the needs of local projects are described in various chapters of a 1990 monograph edited by Barbara Taylor.[36]

I should also note that those of us who work with the national center have found travel to other schools and districts to be particularly valuable. Travel constitutes one of the most effective ways of encouraging consideration of promising practices developed elsewhere and of allowing participants to make informed decisions about the applicability of new practices to their own situations.

9. The success of an effective schools program depends on a judicious mixture of autonomy for participating faculties and control from the central office, a kind of "directed autonomy." Flexibility and independence in making decisions about instruction and other aspects of education have been identified as correlates of effectiveness at both the school and classroom levels. On the other hand, except in the case of isolated maverick schools that have become effective largely on their own, success also requires considerable direction and support from central leadership. This conclusion is compatible with those of researchers who have studied innovation in general and have found that it is most likely to be successful when it combines elements of bottom-up planning and decision making with top-down stimuli and support in setting directions for and guiding the process of change.[37]

Organizational analyst Robert Waterman explains that, in organizations using directed autonomy, the central leadership lets employees know that "persons at the operating level who know the most about day-to-day problems" can take action to solve them.[38] As Waterman points out, directed or guided autonomy can also stimulate commitment on the part of staff members by making their jobs more meaningful and exciting.

School-based management seems to offer a means of promoting consensus and establishing greater stability in schools with improvement programs, especially urban elementary schools. In the article by Barbara Taylor and me that precedes this one (pages 155–161), the topic of school-based management is discussed, along with its role in promoting a commitment to "learning for all students" within an effective schools framework.

Notes

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Essential Elements

THE PERIODIC TABLE: NAME THE ELEMENTS!
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Staff Development

Characteristics of Effective Staff Development Activities

National Staff Development Council, April 1991

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1. **Involvement in planning**—Staff development activities tend to be more effective when participants have taken part in identifying the objectives and planning the activities.

2. **Time for planning**—Whether the staff development activities are mandated or participation is voluntary, participants need time away from their regular teaching or administrative responsibilities in order to plan the program.

3. **Involvement of principals**—Staff development activities in which principals are active participants are more effective. Active involvement means that principals need to participate in most if not all of the activities in which their teachers are involved.

4. **District administrative support**—For staff development activities to be effective, district-level support needs to be active and visible.

5. **Expectations**—Participants should know what is expected of them during the activities, as well as what they will be asked to do when the experience is over.

6. **Opportunity for sharing**—Staff development activities in which participants share and provide assistance to one another are more apt to attain their objectives than activities in which participants work alone.

7. **Continuity**—Staff development activities that are thematic and linked to school and/or district goals are more effective in producing significant, long-lasting results than a series of one-shot activities on a variety of topics.

8. **Follow-up**—Staff development is more successful if follow-up activities are part of the program's design.

9. **Opportunity for practice**—Staff development activities that include demonstrations and practice with feedback are more likely to accomplish their objectives than those activities that expect participants to store up ideas and skills for use at a future time.

10. **Active involvement**—Successful staff development activities are those which provide participants with a chance to be actively involved. Participants are more likely to apply what they have learned when they have "hands-on" experiences with materials, actively participate in exercises that will later be used with students, and are involved in small group discussions.

11. **Opportunity for choice**—When participants have chosen to be involved in a program, there is a far greater likelihood that the experience will be helpful. A meaningful series of alternative activities should also be offered within a staff development program.

12. **Building on strengths**—People like to be recognized as valued, competent, liked, and needed. Staff development activities that view each participant as a resource are usually more favorably received by participants.

13. **Content**—Successful staff development activities are often geared toward a relatively narrow grade-level range and address a specific topic or a specific set of skills. They help participants develop a plan that is ready for immediate use or a set of instructional materials which translate the ideas presented into practice.

14. **The presenter**—Successful presenters approach a subject from the participant's point of view. The presenter's expertise is important, as is his or her ability to convey genuine enthusiasm for the subject.

15. **Individualization**—Staff development programs that provide different experiences for participants who are at different stages of their development are more apt to obtain their objectives than those in which all participants engage in common activities.

16. **Number of participants**—Some presentations are as effective with 100 participants as they are with 10. However, for staff development activities requiring personal contact, informality, and an interchange of ideas, seven to 10 participants appears to be optimal. There are exceptions based on the skill of the presenter, the organization of the activity, and the nature of the topic.

17. **The learning environment**—As a general rule, successful staff development activities occur within a low-threat, comfortable setting in which there is a degree of "psychological safety." Openness to learning is enhanced when peers can share problems and solutions.

18. **The physical facility**—Accessibility of supporting materials, appearance of the facility, room temperature, lighting, auditory and visual distractions,

and many other physical factors have subtle but sometimes profound effects on the success of a staff development activity.

19. Time of day and season—Staff development activities which take place at the end of a school day are often less successful than those offered when participants are fresh. Further, staff development activities are less likely to be successful when they are scheduled at times of the year when seasonal activities (e.g., parent conferences, holiday celebrations) occur. ◄

TEACHER
CONFERENCE
NOV 27TH
Dave Carpenter

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"No school tomorrow, mom. The teachers are regrouping."

The Keys to Effective Staff Development

by Dennis Sparks

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■ *The greatest test of instructional leadership is to improve teaching.*

Significant school improvement efforts are closely linked to quality staff development programs, and elementary school principals must have appropriate staff development knowledge and skills if they are to help move their schools forward to meet the complex educational challenges of the 1990s and beyond.

The 10 recommended practices of staff and organization development that follow, when appropriately instituted, can have a profound impact on the attitudes and instructional behavior of teachers in your schools.

1. Have a clear vision for your school. A shared vision is a powerful force in shaping staff attitudes and behavior. Meaningful mission statements can sometimes be expressed in one sentence. ("All children will experience success in our school and develop their abilities to the fullest possible extent.") While the process of developing a mission statement may be time-consuming, the collaborative effort involved will increase staff ownership and the probability of long-lasting improvements.

2. Establish norms of collegiality and experimentation. Risking new behavior is less threatening in schools where cooperation and experimentation are the norm. New learning often requires operating at the edge of one's competency, and it is difficult to take this risk in a judgmental, hostile environment. Teachers benefit from candid discussions with each other about their successes and failures; this will only occur in schools where staff members learn together and support one another.

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3. Display a collaborative attitude. When it comes to staff development, two heads *are* better than one. Involving teachers in planning staff development activities increases their readiness for the learning that follows. Teachers can be involved in assessing needs, determining goals and objectives, identifying the most appropriate approaches (e.g., study groups, workshops), designing follow-up activities (e.g., peer observation, discussion groups), and creating or selecting the most appropriate program evaluation procedures.

4. Use research on staff development. Staff development programs will be successful only if they are carefully designed and well implemented according to current research. For instance, if workshops are used to improve instruction, it is essential to have the trainers present theory and research, provide demonstrations, and give ample time for practice and feedback. There should also be opportunities for group discussion and problem solving with the new strategies.

5. Recognize that staff development can take many forms. While training is the most frequently used form of staff development, it is not the only one. Susan Loucks-Horsley and I recently investigated five models of staff development (1989), and found that, in addition to training programs, teachers can learn through individual activities, observation and assessment, involvement in a developmental or improvement process, and inquiry (i.e., research conducted in their classrooms or schools).

6. Encourage faculty involvement in a wide range of staff development activities. Allocate discretionary resources at your school to allow teachers to attend workshops and conferences, and ask them to share what they have learned at staff meetings. Remind teachers about upcoming staff development offerings and seek out individuals to attend these programs. Use substitutes, when appropriate, to cover classes so teachers can attend workshops or observe peers during the school day.

7. Stay abreast of recent research and practice. While the demands of the principalship are never-ending, a few minutes of reading and planning each day can focus your efforts. Skim one or two educational journals a week and pass along to teachers articles you know will interest them.

8. View supervision and evaluation as staff development opportunities. Help teachers see supervision and evaluation as opportunities for growth rather than as remedial activities. Whenever possible, involve them in developing observation criteria and methods of data collection. Encourage teachers to select their own areas of improvement.

9. Model what you preach. If you would like teachers to be enthusiastic lifelong learners, it is important to show them that you are one. If you want teachers to risk peer observation, borrow someone's class for an hour and invite teachers to observe. Demonstrate in faculty meetings the instructional strategies that teachers are learning in workshops. Talk with teachers—individually and at faculty meetings—about the goals you have set for your own professional development, and ask for feedback on how you are doing in these areas.

10. Take the long view. Lasting change takes time. Most significant school improvement efforts based on staff development take at least three to five years to complete—and some may take even longer. Recognize that planning, training, and follow-up are all critical events that cannot be ignored if improvements are to last.

School improvement is really people improvement. If you view staff development as one of your most important responsibilities, you will have a profound influence on the direction your school will take to meet the challenges of educating students for the 21st century.

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Instructional and School Leadership

The Essential School Principal: A Changing Role in a Changing School

by Kathleen Cushman

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When people talk about what Essential school principals do, I notice, they reach for metaphors from geometry, physics, architecture. The principal must "up-end the pyramid," some say, supporting the school structure from below, not directing it from above. The principal serves as the "fulcrum of the change process," keeping a delicate balance between the often conflicting pressures coming from teachers, community, district, state. The principal introduces a "blueprint for change," then adapts it continually in response to those who will have to live with it.

The images are filled with tension and motion, conflicts and resolution. Strikingly, they mirror the very process Essential school classrooms hold dear—exploration, questioning, collaboration, reflection, risk-taking. Even more strikingly, they contradict the traditional picture of the principal as strong-armed manager in a hierarchical system, the high-profile executive of excellence who keeps everyone else in line.

Yet nobody describes the principal's position as comfortable; indeed, it is often a confusing one in these times of change. Interviews with administrators from widely different Essential schools across the country bring out time and again the core dilemma Coalition principals share: how to reconcile strong leadership with the participatory decision making that forms the bedrock of any sustained change effort.

At universities and on school boards, among parents and politicians, convention calls for the good principal to lead the charge for reform within a school, waving the banner of change and bearing chief responsibility for victory or failure. What happens when instead the principal gives up that prominence, investing substantial authority in teachers, parents, and students and backing up even their divergent decisions? As teachers gain power, do principals lose it?

Virtually every successful Essential school over the last eight years, say those who have watched the Coalition's growth, has depended on a strong and committed principal more than on any other single factor. Yet the effectiveness of a principal in fostering reform, it seems, is best measured not by immediate results but by whether the changes survive the principal's term.

In this regard, an effective principal must be much more than "keeper of the vision": she must foster a faculty capable of marshaling *itself* to keep the vision and to go forward as a governance system. As the school's intellectual conscience, as its resource for time and opportunities, as manager not of its product but its *process*, the principal carries the Essential School metaphor of "teacher as coach" to the administrative level—provoking, modeling, and nurturing the thoughtful growth everyone in a good school should experience.

The Definition Changes

Current discourse on principals and their role takes place in the context of the "effective schools" research of the past two decades, centered at the University of Wisconsin. The most effective tools, this research effort concluded, had in common a strong building principal. Many school systems nationwide participated in Effective Schools training sessions aimed at strengthening the principal's skills and authority as an instructional leader.

Researchers within the Coalition of Essential Schools argue, however, that the Effective Schools model is less well suited for schools moving away from the existing system. They see that system as flawed, along with the convention of one strong leader it depends on. Looking for a different framework, Coalition member schools have often turned to the 1986 report *A Nation Prepared: Teachers for the 21st Century*, by the Carnegie Forum on Education and the Economy, which recommended moving toward teacher-centered school governance systems.

Schools that have taken such a view, however, often cast principals onto uncertain ground. Often left out of contract negotiations that give teachers substantial decision-making power, principals are nonetheless still legally accountable for what occurs in their schools. They often feel caught between a hierarchical bureaucracy expecting efficiency and authoritative leadership and a ferment from below that requires a new style of leadership—open, unguarded, inclusive, and so regarded by such theorists as Sara Lawrence Lightfoot, author of *The Good High School* (Basic, 1983) as more "feminine" than the traditional patriarchal style. (Interestingly, though only one-fifth of the nation's secondary school principals are women; among Coalition principals women number 35 percent.)

A principal's authority, under such conditions, no longer derives from the organizational structure itself but directly from the teachers, who are becoming leaders themselves. As decision-making power spreads out among the school community, new tensions inevitably arise.

How far can a principal go in expressing his or her own strongly held values, for instance, without imposing them excessively on the school? Can a principal sap teacher-driven changes of their strength simply by withholding strong support, thus encouraging others who are unwilling to participate? In the end, aside from carrying out administrative, disciplinary, and bureaucratic chores, is a principal really necessary when decisions are shared among the staff? Is a good principal these days charismatic or modest, a star or a *mensch*? What does a good principal actually *do* in a successful Essential school?

Architect and Idea Person

"Principals now have to struggle between helping people see new possibilities and enabling them to decide whether they're going to go for the new possibilities," says Patricia Wasley of the Coalition's School Change Study, which provides analysis and feedback to principals and faculties in a few key schools working toward reform. "They may come in as an architect does, with an initial vision—but then they have to be able to accommodate revisions to their notion. If they can't do that, they haven't really learned to operate in new ways."

Coalition principals show a range of styles in this area—from what might be called "dynamic centralism" to a completely consensual practice—and how quickly they push toward change may depend both on personality and on how deep they perceive their school's crisis to be. At Chicago's Robeson High School, for instance, principal Jackie Simmons defends her decision to double the length of classroom periods despite a close faculty vote against it.

"A high school generation of kids is only four years long; you want to provide the best you can as fast as you can," Simmons says. "I had to decide between the best interests of the kids and paying attention to process alone, letting the teachers get there eventually." After much back and forth with her teachers, Simmons modified her original proposal from 84-minute periods (on which the teacher's contract required a vote) to doubled-up 40-minute periods (which did not require approval). It was a risky move, she admits, though a subsequent grievance procedure upheld it; now, she says, even teachers once opposed praise the new schedule. "For me, leadership means having the courage of your convictions," Simmons says, "being willing to risk everything, and getting teachers over the fear and rough edges. This never would have happened if I had left it to teachers to hassle it out from ground zero."

Sid Smith, principal of the 1,350-student Boston English High School, agrees. "I cannot allow something to pass here that I will not stand up for and defend 100 percent to the world," he says. Without faculty debate, for instance, Smith instituted "binding assessments" in several academic areas, without which a student may not graduate from Boston English. But the assessments themselves were crafted by teacher committees, he points out. "The final product in math looks different from what I'd like it to be," he says, "but that's an area where we'll go with the consensus decision." Even so, he says, "When push comes to shove I reserve the right to make a decision that might not be endorsed by the majority of my staff." Smith insisted, for example, that seniors taking the final year's assessment demonstrate mastery over all four years' math skills, though math teachers preferred to test them only on senior year coursework.

Smith calls his approach a "dartboard methodology," in which he presents his ideas as a target and lets people throw criticisms and alternatives back at him. "Had the dartboard not been in place we wouldn't have come up with any hard change product that didn't exist before," he says. "In the absence of a tangible product you'll never institutionalize anything. When I came to Boston English I said that every student had to have a C average to participate in extracurricular activities. Now it's a city standard."

But other Coalition principals take a much different approach. "Aside from certain issues like law and order, we may lose more than we gain when we bypass that important process of starting from the ground up and letting the change take hold systemically," says Sherry King, who was principal of 330-student Croton-Harmon High School in Westchester County, New York, until she took the superintendent's job in her district this year. "You can say, 'We're going to have a different schedule where teachers work together,' but if you put a teacher into that schedule who is opposed and unprepared, my own experience is that you may get the opposite result."

Timing, King asserts, is everything, and she observes that the best leaders have an instinctive sense of when they can push teachers to a new level of constructive dissonance. "A principal needs a very sensitive barometer," she says, "to back down when the time isn't right, when people don't believe. Teachers who don't believe will make a change not work." Five years ago she would have pushed her teachers more quickly, King observes, toward her goal of having every student in the school take New York's state Regents exams, which finally occurred this year after King had put it off one last time because teachers were hesitant. She prefers to err on the side of caution, she says, letting her staff take more time to question and reflect. "Now they're pushing themselves," she exults. "Five kids who never would have taken that test came within two points of passing—if we had been modestly more bold in waiving certain testing circumstances, they would have passed. I thought it was a great victory, and my teachers thought it was a great defeat."

Paul Schwarz, co-director with Deborah Meier of New York City's Central Park East Secondary School, is another who will not institute a change without full faculty approval. "A principal can try to change minds, can fight, can bring in resources, can take time again and again to show the implications of a decision he disagrees with," he says. "But the highest decision-making authority ought to be the school itself. If teachers are making decisions absolutely at odds with your beliefs, you need to find another school." In the end, Schwarz asserts, "It's not *my* school. It's *our* school, which is why teachers are willing to work extra long and hard so they can be proud of it. It's the difference between a McDonald's and a mom-and-pop bodega."

Diagnostician, Goad, "Noodge"

One way principals lead people toward change is by continually asking teachers to analyze and reflect on how they teach. "You're changing the way people think about their professional practice," said Paul Schwarz, "so you have to guard against regression. If teachers start to teach the way they have been taught, not the way they've come to believe in teaching, they'll do things that need to be reflected back to them." That role of "noodge," as Sherry King describes it, means the principal must be willing to confront people individually when she sees inconsistency in what they're doing. How do the worksheets a teacher is using fit into the school's philosophy of student as worker? What are the intellectual implications of the coursework planned for the coming semester?

On a more public or collective level, the principal-diagnostician also makes sure that people continually re-commit to their involvement with Essential School principles. Most Essential school principals interviewed here agreed that the school's original decision to join the Coalition was not up for grabs, at least under their leadership—but they felt compelled to keep examining its progress toward its professed goals. If the goal is for every student to demonstrate competence in important intellectual tasks, the principal might ask teachers to reflect, for example, on how homogeneous ability grouping fits into that aim.

What gets monitored by the principal, ideally, is not just classroom pedagogy and instruction but the very process of decision making itself. "It's much more *process* management than *task* management," says principal Alan Dichter of New York City's Satellite Academy, a group of several small alternative schools. (With Nancy Mohr, principal of University Heights High School in the Bronx, Dichter leads workshops for principals across the country.) "Tasks may get decided somewhat collectively," he says, "but the best principals get their faculties to monitor and assess their own process, so they're not so dependent on any one leader to carry out the task of change."

Robert Shirley, the headmaster of Heathwood Hall Episcopal School in Columbia, South Carolina, speaks eloquently about the tension that results when a principal begins that process. A former Marine officer and banking executive, Shirley says he was well used to "a hierarchical authority structure dominated by white males" when he encountered the ideas of both Theodore Sizer and Carol Gilligan in a weekend seminar a decade ago. Working toward shared decision making at Heathwood Hall, he recalls, was uncomfortable for everyone involved. "Just as in an organic body," he says, "all kinds of two-way signals get passed back and forth between every member of the system and the head. Just as much may go on with teachers' abdicating power as with the central person's seizing it." Change must happen, Shirley says, "in the nooks and crannies" of those subtle communications. "But it will only be operating as a synergistic thing when the organization itself realizes that it is happening."

Marilyn Hohmann, the principal of Fairdale High School in Jefferson County, Kentucky, is widely considered a master of this synergy. "You've got to realize that people learn in different ways and at different speeds," she says. "I never let anybody—even the most intense resisters—depart or withdraw from the process of sharing these decisions. I make them constantly respond, even if they constantly respond in the negative. It takes tremendous persistence, patience, even a willingness to accept unprofessional conduct at times; but it has to be that way if we're going to get people truly to believe it's okay to take risks. Some of our staff really do see changes like de-tracking as a lessening of rigor compared to what they have always done."

Once a program is in place at Fairdale, it receives regular critical attention. "We never pilot anything for less than a year," Hohmann says. "Then we start analyzing and evaluating it, asking what measures were effective, what we have learned, whether we should continue."

A Leader of Leaders

Though these principals represent a range of styles, all of them emphasize the need to distribute authority, to trust their staffs to use it well, and to facilitate the conflicts that arise when decisions are shared. Chuck Bowen was hired as principal of Broadmoor Junior High School in Pekin, Illinois, after having worked there as an outside facilitator when the school joined the state's Re:Learning initiative. "The principal's job is to guide the learning process about how organizations make decisions," he says, "until you've all come to an understanding of how this school makes its decisions."

At Broadmoor, that now includes four broad rules that govern administrators, staff, and parents:

- You must participate in decisions that affect you.
- You can't make decisions that affect someone else without involving them.
- Everyone who participates in a decision lives with it until the decision is reversed together.
- You are responsible for the effects of your decision, so it is your job to make sure it works or together unmake and improve the decision.

"When our school reorganized into teams, for example, everyone was affected so everyone was involved in the decision," Bowen says. "The emotional impact of the decision was potentially great, so we decided to do it only if everyone could live with it. Once we made the decision, we all decided how to make it work by helping the school board, the central office, and the community understand it. And when flak came our way, the whole school responded—the entire staff showed up at a school board meeting not out of a sense of crisis but just to make sure their questions were answered."

Bowen calls this system "distributed decision making"; its first step, he says, is deciding which decisions belong to classroom teachers, which to teams, which to administrators, which to the school as a whole, and which involve the community. "My job is to monitor not only the process but the content of the process," he says. "I make sure we're talking about important things, so people don't get bogged down talking about pencil sharpeners and heating systems."

"Teachers make a lot of decisions in schools whether you want them to or not," Bowen observes. "Why not organize the school to take advantage of that rather than suppress it?"

What if conflict divides the decision-making body? "The principal has to coach people to participate in conflict in a way that isn't personally damaging," Patricia Wasley observes. "Feeling conflicted is an essential part of learning, for both adults and kids. The principal must keep pushing people to be open about their various viewpoints; otherwise the faculty becomes subversive."

"You watch a lot of people take a lot of heat, and it isn't easy," says Marilyn Hohmann. "You have to quietly support them, keep a low profile, exercise minimal oversight of meetings—but provide as much as possible in the way of a support system, both external and internal."

And what if the final decision goes against the principal's own convictions? "Trust the process," says CES's Director for Schools, Bob McCarthy, who himself has headed high schools in Hanover, New Hampshire, and Brookline, Massachusetts. "If the decision-making roles have been clearly defined, go ahead with it even if you disagree. There's rarely any one decision that can make or break a school."

From central office to school board, the school hierarchy must also abandon a knee-jerk support for what the principal wants. "At a board meeting where a significant decision must be made, the best principals have the presentation made by teachers, students, and parents," McCarthy says. "It's a courageous thing to do in a system that is used to high-profile leaders."

But the more powerful the system a principal heads, Alan Dichter observes, the more its leader is perceived as strong. "And if the decision is not his to make," he says, "the principal is actually in a much better position to make his own views known in a strong and forthright way." Delegating power for important decisions makes the principal a leader of leaders, Dichter and Nancy Mohr believe. It creates not an "authorizing culture"—where the leader gives people "official permission" to do things and then holds them accountable—but an "empowering culture," where meaningful involvement is an obligation and all involved develop the ability to participate.

In Chicago, where local school councils now govern all public schools, Jackie Simmons sees a striking change in the school climate since her staff has developed expertise in important administrative matters. "We have nine 'design teams' that handle areas like professional development and staff selection," she says. "Ad hoc training sessions continually spring up, where teachers help each other learn new things. And at a citywide job fair attended by 4,000 teachers last week, we were the only school that had a team of teachers, not a lone principal, interviewing applicants for the four positions we had available."

The Principal as Teacher

It seems natural, given all this, that many Essential school principals speak of their role as teachers, in the sense that they coach their faculty to think independently, learn continually, take intellectual risks. "Like a good teacher, your job is to motivate, to lead, to create an environment where people can best work," says Central Park East's Paul Schwarz, who (like his co-director Deborah Meier) taught kindergarten for 20 years and believes the experience shaped his vision of school leadership. "You can't impose reading on children, for instance—you have to let them discover at their own pace how wonderful it is."

The very process of participatory management, for example, provokes teachers to learn new skills. "Our folks never dreamed that learning to use Edward Deming's model of shared decision making would teach them how to use data so well," says Marilyn Hohmann. "Now they do all kinds of statistical analysis—they not only use it for charting student improvement and attendance, but they can also teach kids to use quantitative reasoning in academic areas."

Learning what works in education is part of a teacher's education when power is shared. "Teachers need access to a tremendous amount of facts when you ask them to make decisions about important issues like de-tracking," Hohmann observes. "It can be a real learning experience, and my responsibility is to make sure they know what they need to know."

Even more important, several principals noted, sharing responsibility for school decisions helps teachers learn how to cooperate on joint learning ventures, which translate directly into classroom expertise on cooperative learning. "Secondary schools, unlike elementary schools, have traditionally been very isolating places for teachers," says Hohmann. "The most difficult task we face is learning to work together."

One reward when teachers do that, say principals, is a new sense that their jobs offer continual personal and professional growth. "I try to foster an ethic in which teachers transcend the limitations of their role," says Larry Myatt, who heads Fenway Middle College, an alternative Boston high school. "They're not just teaching four classes and guarding the cafeteria—they're supervising internships, working as peer mentors to new teachers, researching new curricula, reporting to each other on visits they make to other schools." Raising the level of the school's internal discourse, Myatt says, is a key part of his job:

"Every day there is something in teachers' boxes about research, pedagogy, learning, assessment."

Several principals spoke similarly of their role as support person for the classroom teachers, clarifying issues and gathering resources so that teaching, learning, and decision making might go better. "My job as a leader is to stay at the cutting edge of things in education, and to make sure teachers see things, hear them, and talk about them," says Jackie Simmons. "I arranged a computerized network throughout our building, for instance, so that any teacher anywhere can use software in an interdisciplinary way."

Record-Keeper, Point Person

Provoking a rich conversation about contemporary practices, several observers note, is one of the most important functions of an Essential school principal. But a key adjunct, as in any community of researchers, is to document and analyze the results of the changes a school adopts.

"I encourage teachers to write up and record what they do, so we can share it with other people," says Lenora Hay, principal of Brown School in Jefferson County, Kentucky. "It takes time and space, but I feel a commitment to doing it." A prime example of this takes place at Pasadena High school, where principal Judy Codding obtained a grant to follow every entering ninth grader's progress through graduation and beyond.

The natural extension of this practice takes the principal into the community to talk about the school's changing values and practices. "We have a larger role in the district, the state, even the nation," says Larry Myatt, who admits that joining the public discourse can be "a fearsome thing" at first. "I agree with Ted Sizer that if we don't make these choices, people will make them for us—things like national testing will be imposed on us simplistically, adding another debilitating layer to the problems that already exist. Principals have to forsake just writing in our journals and get out to talk about our ideas with parents, business people, legislators, anyone who will listen."

Such a public presence, naturally, invites public criticism as well, and these principals are well aware of their own accountability for change in their schools. "When I don't sleep," Sherry King confides, "is when I encourage people to take these risks and I just don't know for sure if it's the best thing for the kids. I don't ever remember feeling as anxious as I did the day of those Regents exams. It's like giving birth—you pace the floor, asking whether it's fair to ask kids to take the test if they might not pass, whether you've thought through all the consequences. In the end, if you're worth your salt the buck stops with you, not with the teacher who's gone out on a limb."

What Do Principals Need?

Given such daunting new demands, what kind of preparation and support do Essential school principals need? Conventional principal-certification programs generally focus more on school law, facilities management, statistical skills, and personnel policies than on the new challenges that face principals in times of change. Unless the Coalition itself were to establish a certification program—a move strongly urged by one of its charter principals, Dennis Littky—principals will get little training in shared leadership as they climb the traditional ladder to the school's top job.

"When you have a whole new climate in your district, you have to look within the system for your leaders," says Superintendent Jerry Parker in Pekin, Illinois, where he chose Chuck Bowen to head Broadmoor Junior High. "We're establishing a program to recruit and mentor those teachers we think have promise as administrators. They'll still have to jump through the state's hoops, but we'll help them come out of the licensing process with the skills we're looking for." Parker has begun teaching a monthly class in his office for teachers interested in moving up, and he continually scouts for possible new enrollees. "Some of the best leaders didn't start out thinking they would end up in administration," he says.

"There is an ambivalence among teachers in progressive education about the principal's position," says Paul Schwarz. "Many see administrators as bosses and bureaucrats, number-crunchers who have gone over to the other side. The Coalition needs to show our best teachers a different kind of power—to convince our best teachers that being a wonderful principal or administrator is an honorable thing to do in our profession."

In fact, the Coalition's National Re:Learning Faculty program includes just that aim. Besides naming some 20 teachers each year as Citibank Faculty to coach their peers in new ways, the program also names about a dozen Thomson Fellows from the ranks of Essential school principals. Fellows meet regularly for seminars and workshops in Essential school leadership, and they provide for each other the peer fellowship and "critical friends" that principals commonly lack.

Other principals turn to their own community for support and training, sometimes through unconventional channels. Lenora Hay has joined a group of Kentucky women in school administration, many of whom have come to their positions very recently and through nontraditional paths. "Because I was a curriculum coordinator before, where I had to rely more on friendly persuasion than on power, I haven't had to unlearn previous habits," Hay says. "Also, I think there may be more of a natural bent among women toward collaboration."

Some principals have asked local corporations to include them in executive leadership seminars, which often focus on shared decision making. In other districts, professional development centers like Jefferson County's Gheens Academy provide a forum for growth and training. Still other schools, such as Central Park East, choose to divide the top position between two or more people. "Every school ought to have two principals, maybe instead of a principal and an assistant principal," says Paul Schwarz. "When really tough judgment calls arise, two people make them better than one."

From their districts and their state education offices, these principals ask for a constant environment that encourages change. "Re:Learning as an idea is centered on creating that environment 'from schoolhouse to statehouse,'" says Illinois principal Chuck Bowen, "but it needs to focus even more on the district level." Symbols like pay and access to higher-ups are also important to principals as leadership roles shift. In Jefferson County, Kentucky, superintendent Don Ingwerson eliminated a hefty number of middle-level district administrators, giving his principals more access to systemwide services and asking them to report difficulties directly to him.

What Is a Principal's Power?

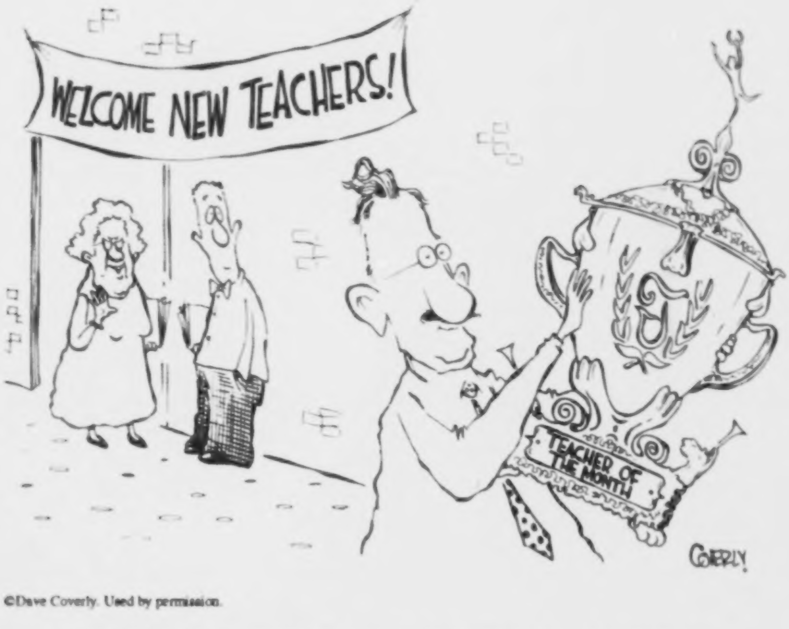
As the roles of Essential school principals change, the ways they perceive their own power change too, and so do their attitudes toward those they lead. "Real power is the ability to say *yes*," says Jackie Simmons. "People come to you with ideas, and you can help them. Sometimes you can best help by offering a creative alternative, keeping the person moving in a positive direction at the same time you preserve the relationship. My teachers laugh at me because I'm always 'making them an offer they can't refuse'—but if I do, I try to make it really a better idea."

How do principals harness the power of those they lead, ask Nancy Mohr and Alan Dichter, if not by directing it from the top down? "By recognizing that 'independence' is not the goal but a mid-point," they write. "We must strive to create an interdependent community, where these self-reliant and independent citizens understand the greater potential that interdependence offers." So the principal, they say, can help the school community become more than the sum of its parts. Power indeed, as Mohr points out—but not a dirty word.

"Sure, this could all be done so much more quickly and easily," says Marilyn Hohmann. "You could just say 'Do it' and it would be done. Thank God I have a long, narrow office—I can't tell you how many times I have started out of here intending to do just that, and changed my mind before I got out the door." It takes longer to achieve change when you redefine the principal's role, Hohmann acknowledges. "But by God, the change takes—just like an immunization. There was no way of ever telling *what* took, back when people just did what they were told."

Only when principals share school leadership, Hohmann argues, can a true community of learning exist, where every member learns and also teaches. "Kentucky takes so many of our school's great teachers to lead others in the reform effort," she says. "We *have* to replace them as leaders with other teachers. For that you need a climate where people can risk trying new things, and the principal has to start it. What we're doing, all of us, is teaching and learning. They're inseparable, an endless wheel."

Like all great teachers, Hohmann lives out her convictions with such authenticity and strength that many who work with her choose ultimately to shape their own practices after those beliefs as well. In the end, Theodore Sizer observes, that quality may serve a principal better than any other. "It takes a different kind of leader to lead a school that's going to change," he says. "It requires a person who can truly be ***primus inter pares***—the first among equals—carrying the authority of the principal teacher, born of conviction and experience." More sharply than most in the engine of Essential School change, principals may feel the friction Hohmann's "endless wheel" creates. But they seem bent on transforming the energy that results, and perhaps transforming themselves into the bargain. ◀



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"You'll find the principal really believes in teacher support."

The Principal's Role in Shaping School Culture

by Terrence E. Deal and Kent D. Peterson

U.S. Department of Education, Office of Educational Research and Improvement (1990).

School culture is that intangible "feel" of a school, the unspoken understanding of "how things are done around here." You can sense it as you approach the building. You can almost smell and taste it as you walk through the doors. You can see it in the pictures on the walls or hear it in the chatter in the halls. School culture reflects the values, beliefs and traditions of the school community, which underlie the relations among students, parents, teachers and principals.

As school leaders, principals can influence and mold school culture in positive ways. Principals who are able to work with teachers, students and community members to create a commitment to common values and a bond between one another and the school create successful school cultures.

They all do it their own way. One wears the school "logo" on his jogging shoes. Another lights a candle, a symbolic "lamp of learning," at the beginning of the school year. Others tell stories of students and faculty who have succeeded despite hardships. All of these principals set an example of the values they wish to incorporate into the daily routine of school life—into its culture.

Fortunately, the symbolic meaning of these actions was appreciated by the school community; it is not always so. One well-meaning principal fixed up a storeroom housing old textbooks, workbooks and miscellanea during spring vacation to surprise the teachers with a workroom. The teachers had requested a workroom, and complained about the "junk" in the storeroom. Yet, when the teachers returned to school, they filed a grievance against the principal. This principal had thrown away, not junk, but the school's history and cultural artifacts.

Terrence E. Deal authored (with Allan A. Kennedy) the bestselling book *Corporate Cultures: The Rights and Rituals of Corporate Life* (Reading, MA: Addison-Wesley, 1982).

Kent D. Peterson's work is widely used for training school improvement leaders throughout the United States and in Europe.

The Principal's Role in Shaping School Culture, written by Terrence E. Deal and Kent D. Peterson and published by the Education Department's Office of Educational Research and Improvement, provides help to principals wishing to bolster or transform school culture. The book defines school culture, presents examples of how principals have improved their schools and examines the commonalities of their strategies. This short book uses five case studies to show how a variety of school leaders—black and white, male and female—in very different school settings—elementary, secondary, rich and poor, urban, suburban and rural—have READ and SHAPED the culture of their schools.

Principal as Cultural Leader

Culture-shaping activity is often indirect, intuitive and unconscious. However, the cultural dimensions of the principal's job should not be overlooked. The principal is not only an administrator making sure that buses run on schedule and that substitutes are found for absent teachers, the principal is also:

- **A symbol** who models values in routines, dress and behavior
- **A potter** who shapes the school's heroes, rituals, ceremonies and symbols, and who is shaped by them
- **A poet** who uses language to reinforce values and sustain the school's best image of itself
- **An actor** who improvises in school dramas
- **A healer** who oversees transitions and changes in school life

The Voices of School Culture

Cultural leadership is the art of fusing a personal vision with a school that needs direction. This requires *both* a principal who knows what he or she wants *and* a community of faculty, parents, students and staff who believe they need a new direction to solve existing problems. To redirect the school, there must be agreement between the principal and the school community. It is crucial for the principal to correctly "read" the culture by listening to the voices of the school community. Some key sources of information are:

- **Priests and priestesses:** longtime residents who can link past traditions to present traditions
- **Storytellers:** skilled communicators who can recount the informal school history and personify the present
- **Gossips:** the grapevine that carries information far ahead of formal channels of communication

Some Culture-Shaping Principals

No two schools or principals are alike. The following case studies show that despite many differences, principals who understand the culture of their institutions can be successful at achieving reforms.

FRANCES HEDGES, Inner City Elementary School—Ten different languages could be heard on the grounds of Orchard Park Elementary School. In this poor urban community, many students needed additional help in developing basic English proficiency. Frances Hedges spearheaded a major effort to develop a strong reading and language arts program in her school based on the belief that if students could improve their reading, other academic areas would improve as well.

Hedges hired a reading specialist. She regularly went into classrooms and worked with teachers, monitored student progress, reviewed all report cards and insisted that the librarian work with the reading consultant. Teachers and students understood the importance she attached to reading.

Several teachers resented the "intrusion" of the reading specialist. In response, Hedges organized a retreat weekend at which conflicts were aired and resolved. In the process, shared values were strengthened. The result was improved staff relations. With the entire school community working together, there was a rise in the level of student achievement.

RAY MURDOCK, Rural Elementary School—When Ray Murdock arrived at Jefferson Elementary School he faced a tremendous challenge. Overall, Jefferson was an unpleasant place to be; the exterior was dilapidated, morale was low, funds were minimal and the high proportion of transient families made it difficult to sustain parental support in this poor rural community. Murdock wanted to make Jefferson a supportive haven for students' academic growth and self-esteem.

He therefore gave teachers autonomy to select instructional strategies and then held them responsible for the results. He hired accordingly. A cohesive faculty with similar educational values created an atmosphere conducive to learning.

Murdock worked towards making kids want to come to school. Ping pong and tetherball tournaments were held, and each child met Murdock in his office for special recognition of his or her birthday. Murdock undertook small- and large-scale activities to create a school culture in which children felt secure and accepted.

With a strengthened sense of community, the dedication of faculty, and the interest of students, Jefferson became the center and focus of community life.

FRANK BOYDEN, Private School—Under Frank Boyden's leadership, Deerfield Academy transformed from a local academy into one of the nation's top private boarding schools. In the process, a tradition of loyalty to the Deerfield "family" that valued performance in academics, athletics and social service developed.

A strong sense of school loyalty and personal achievement were emphasized by the routines of student life; students ate meals together, worshiped together, retired for the night at the same time. In addition, all participated in athletics and practiced regularly.

Teachers were recruited who shared Boyden's educational philosophy. When a key senior faculty member was offered a higher salary at another school, Boyden did not counter the other school's offer. And, the teacher stayed! Being part of the Deerfield family was much more important than status or money.

HANK COTTON, Suburban High School—Before Hank Cotton's arrival at Cherry Creek, a wealthy suburban high school, the school worked on an "open campus" policy; students were free to come and go when they had no class. Sanctions for cutting class and school were not regularly enforced, and in-class attendance was below 80 percent during some classes. On the premise that attendance is the prerequisite for performance, Cotton changed the school's attendance policy.

Soon after, 235 students were suspended for infractions. Cotton was constantly on the phone explaining the new policy to irate parents. The policy gained support as it was easily explained in terms of other parental values—students have to be in class to learn.

By the 1980s, attendance became one of the highest in the district, even though students were still allowed to go to study hall or to leave the school grounds when they had no class. Attendance increased not because students feared sanctions, but because attendance became part of the school's mores—part of its culture.

BOB MASTRUZZI, Urban Secondary School—Bob Mastruzzi had the opportunity to build a culture of excellence into Kennedy High's culture right from the start, since it was a new school. Everything he said and did reinforced academic accomplishments and inclusion of students from diverse backgrounds within the school.

He bragged about city athletic championships, special academic programs and the faculty who developed them. He told Horatio Alger stories of students who overcame language and other barriers to achieve top ranks among their peers. As principal, he became Kennedy High's biggest PR man.

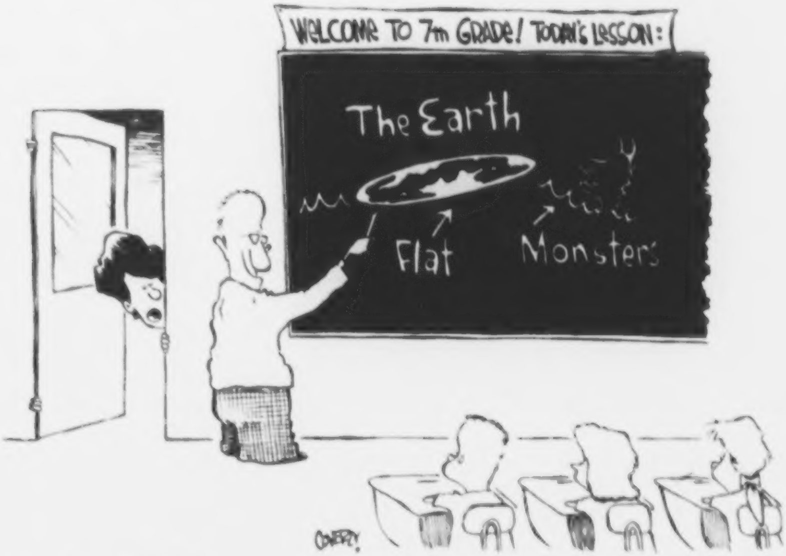
Mastruzzi managed to create a common vision in this school of over 5,000 students from all social classes and ethnic groups. Absenteeism was low, students applied to transfer in, and overall, those in the school and the district now view Kennedy as one of the better high schools in the system.

Common Tactics for Building School Culture

No exact science exists to tell principals how to improve their schools. These principals made educational excellence part of their schools' cultures by:

- Developing a vision of what the school should be

- Selecting staff with corresponding values
- Facing conflict rather than avoiding it
- Setting a consistent example of core values in daily routines
- Nurturing the traditions, rituals, ceremonies and symbols that reinforce the school culture ◀


WELCOME TO 7th GRADE! TODAY'S LESSON:
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Flat
Monsters
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"The principal wants to see you after class."

High Expectations

Accelerated Schools for Disadvantaged Students

by Henry M. Levin

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■ *By mobilizing instructional and community resources to bring students up to grade level before they leave elementary school, a Stanford model program expects to prevent dropouts.*

Although the rhetoric of recent state reforms stresses improvement of education for *all* children, the substance of the reforms does not support it.[1] The reform movement systematically neglects educationally disadvantaged students.

Moreover, the number of disadvantaged students in our schools is increasing rapidly. The current enrollment is about 30 percent of elementary and secondary school students, a far higher proportion than in the 1960s.

Why are these numbers increasing so rapidly? Several explanations apply. First, disadvantaged populations have a higher birth rate than other populations. Second, the United States is experiencing legal and illegal immigration in waves unprecedented since the turn of the century. And third, the proportion of children in poverty families, many of them female-headed, is higher today than it was a decade ago.

The dropout rate of disadvantaged students is also higher; according to recent data, it approaches 50 percent. In addition, a 1976 government study found that while 13 percent of all 17-year-olds were functionally illiterate, among Hispanics the percentage was 56; among blacks, it was 44. These figures, too, are undoubtedly higher today. The current reforms stress raising standards at the secondary level, but do not provide additional resources or new strategies to help disadvantaged students meet these higher standards.

Any strategy for improving the educational plight of disadvantaged

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students must begin at the elementary level, and it must be dedicated to preparing children to do high quality work in secondary school. Simply raising standards without making it possible for disadvantaged students to meet them is more likely to increase their dropout rate than to improve their education.

Two typical state reforms set competency standards and raised course requirements for graduation. Yet even with the current standards, disadvantaged students enter secondary school with achievement levels that are two years or more below those of their counterparts. Unless this gap can be closed before students enter secondary school, the higher standards will discourage students far more than they will improve their performance.

In this respect, the current wave of reforms may benefit some students, while actually blocking educational improvements for others who are disadvantaged. Reforms for disadvantaged youths must address their needs directly, rather than assume that raising general standards will automatically meet the needs of all students.

Existing Intervention Models

Experience over 20 years has shown that instructional interventions[2] exist that promise to improve the achievement of disadvantaged students. For example, peer tutoring, cooperative learning, mastery learning, computer-assisted instruction, preschool programs, and new curriculums all have shown some success. The major challenge is that these successes have been exceedingly modest relative to the achievement gap. Raising achievement from the 15th to the 20th percentile, for example, does not substantially improve the educational or occupational fortunes of disadvantaged young people.

Our progress toward improving the education of disadvantaged youths is also limited by the way in which we think about and address the problem. We know that they begin school with a learning gap in areas that schools and mainstream economic and social institutions value. But remedial interventions are not adequate unless they substantially narrow that gap by bringing the disadvantaged up to the same range of academic performance as their peers.

Several inconsistent assumptions characterize the existing intervention model: it assumes that disadvantaged students will not be able to maintain a normal instructional pace, that merely providing remedial services will close the learning gap, and that no timetable is required. Placing youngsters in a less demanding instructional setting without a time limit may appear rational and even compassionate, but we must consider the consequences.

First, the current intervention model reduces learning expectations of both the children and their educators. By labeling both children and teachers as inferior, the model contributes to weak social support for the activity, and low social status and negative self-images for the persons engaged in remediation. The combination of low social status and low expectations treats such students and their educators as educational discards, marginal to mainstream education. These are the unhealthy conditions under which to expect significant educational progress. In contrast, *an effective approach would create learning activities characterized by high expectations and a learning environment characterized by high status for the participants.*

Second, the usual treatment of the educationally disadvantaged students is not designed to bring them up to grade level. No timetables exist for doing so, and few incentives or even provisions are available to move students from remedial instruction to the mainstream. In fact, since we expect students in remedial situations to progress at a slower than "normal" pace, they fulfill our expectations by falling further and further behind their counterparts. The result is that once we relegate a disadvantaged student to remedial or compensatory interventions, that student will be expected to learn at a slower rate, and the achievement gap between advantaged and disadvantaged students will grow. While the gap may be measured in months of achievement in first grade, it will have grown to years of difference by secondary school. *A successful program would set a deadline for closing the achievement gap so that ultimately educationally disadvantaged children will be able to benefit from mainstream education.*

Third, by deliberately slowing the pace of instruction to a crawl, the existing intervention model emphasizes endless repetition of material through drill-and-practice. The result is that the school experience of disadvantaged youths lacks vitality, and their slow rate of progress reinforces our low expectations. The programs omit interesting applications and assignments in favor of drudgery. The premise is that students must learn fundamentals before they can be offered anything more challenging. As a result, both language and mathematics skills are virtually without substance, emphasizing mechanics over content. Such a joyless educational experience diminishes the possibility that the child will view school positively. *An effective curriculum for disadvantaged children would not only be faster paced but would actively engage their interests and motivate them to learn.*

In addition to these shortcomings, most compensatory educational programs do not adequately involve parents or use available community resources. Furthermore, the programs exclude the professional teaching staff from participating in important educational decisions. Such an omission means that teachers are expected to implement programs which do not necessarily reflect their professional judgments, a condition which is not likely to spur their enthusiasm. *The implementation of successful educational programs to address the needs of educationally disadvantaged students requires the involvement of parents and the extensive participation of teachers.*

Given the severity of these impediments to the effective schooling of the educationally disadvantaged, it is little wonder that even the most successful programs have produced only modest results. It is the basic approach and its underlying assumptions that are at fault.

A New Approach

What we have learned from the experience of the last 20 years is that an

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effective approach to educating disadvantaged students must be characterized by high expectations, deadlines by which they will be performing at grade level, stimulating instructional programs, planning by the educational staff who will offer the program, and the use of all available parental and community resources. At its heart, however, the educational intervention must be transitional: it must be designed to close the achievement gap after a period of intervention so that students can benefit from regular instruction.

To meet these goals I have been working with a group of colleagues at Stanford University's School of Education to design a program of accelerated schools. The accelerated school is a transitional elementary school designed to bring disadvantaged students up to grade level by the end of sixth grade so they could take advantage of mainstream secondary school instruction. The approach is also designed to prevent dropouts by eliminating the single most important cause of dropping out: serious achievement deficits.

The goal of the accelerated curriculum is to bring all children up to grade level, rather than to limit interventions for the disadvantaged to "pull out" sessions. This approach requires an assessment of each child's performance at school entry and sets a series of objectives. Periodic evaluations on wide-spectrum, standardized achievement tests, as well as tailored assessments created by school staff for each strand of the curriculum, enable the school to see if the child is meeting objectives in a timely manner.

The curriculum emphasizes language—reading and writing for meaning—in all disciplines, even in mathematics. The curriculum also applies learning to everyday problems and events. Instructional strategies also include peer tutoring and cooperative learning.

Parents are deeply involved in two ways. First, school representatives ask parents to sign a written agreement that clarifies the obligations of parents, school staff, and students. Second, the school provides opportunities for parents to interact with the school program and actively assist their children. Parents are also asked to set high educational expectations for their children, to encourage reading, and to support their success.

Another aspect of the program is an extended day which provides rest periods, physical and arts activities, and time for independent assignments or homework. During this period, college students and senior citizen volunteers work with individual students. Both strategies have been shown to be especially effective with disadvantaged students. Since many of the students are "latchkey" children, the extension of the school day is likely to be attractive to parents.

These broad features make the accelerated school a total institution, rather than a graft of compensatory or remedial classes onto conventional elementary schools. However, in adopting the accelerated school model, each school will choose its own curriculum and instructional strategies; those who will provide the instruction will make the decisions.

Each school will set out a program that is consonant with the strengths of the district and its own staff. A site team, composed of instructional staff and a representative of the central office, will coordinate this effort. The Stanford group will assist in the planning process by providing information, technical assistance, and help in initiating a school-based governance model. In this approach to reform, the professionals who are providing the instruction make the decisions that they will implement and evaluate.

The Costs of New Initiatives

During the 1986–87 school year, the Stanford group has been developing a full information clearinghouse on the Accelerated School, on training capabilities for staff, and on an assessment model. At the same time we are working with school teams in San Francisco and Redwood City, California, to plan accelerated schools that will open in autumn 1987.

We believe that accelerated schools can be successful because they emphasize the instrumental goal of bringing students up to grade level by the completion of sixth grade and stress accelerating learning and high expectations. They will rely on a model of school governance that is attractive to educators, and they will benefit from instructional strategies that have produced good results within the limits of existing compensatory education models. In addition, the schools will draw upon all of the resources available to the community, including parents and senior citizens.

In large measure, we believe that schools can implement the approach within existing resource constraints, including federal and state categorical grants. Only extending the school day will add to local budgets. Finally, this approach does not require new legislation at either the state or federal level, but can be implemented with local initiatives by educators and parents.

By solving many of the problems educationally disadvantaged students face at the elementary level, we hope to save much of the cost of secondary school dropout programs and to reduce the risk that students will drop out. We believe that improved levels of school achievement and self-concept will also go far to reduce problems of violence, drugs, and teen pregnancies among secondary school students. Unless we take a bold stand to intervene now on behalf of disadvantaged young people, we will soon reap the distasteful harvest of our neglect.

Notes

1. Henry M. Levin, *Educational Reform for Disadvantaged Students: An Emerging Crisis* (Washington, DC: The National Education Association, 1986).

2. Included among these are Jere Brophy, "Research linking teacher behavior to student achievement: Potential implications for instruction of Chapter 1 students"; Penelope Peterson, "Selecting students and services for compensatory education: Lessons from aptitude-treatment interaction research"; and Thomas A. Romberg, "Mathematics for compensatory school programs." Papers prepared for the Conference of Effects of Alternative Designs in Compensatory Education, sponsored by the Office of Educational Research and Improvement, U.S. Department of Education, June 17–18, 1986. ◀

Remedial Curriculum for Low Achievers Is Falling from Favor

by Hilary Stout

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LOS ANGELES—Jonathan Williams teaches sixth-grade students a lesson from 10th-grade biology. To learn about cells, his students peel back a thin layer of onionskin, fix it to a glass slide and examine it under a microscope.

Elsewhere in the school this past semester, sixth graders read and performed the Rossini opera "Barber of Seville," fourth graders researched the California missions, and a combination fifth-and-sixth-grade class designed, wrote and printed a newspaper.

These aren't advanced students. In fact, 87% of them score below the mean level for their grade in standardized tests. They go to a public school in Watts, deep in a neighborhood of drugs, gangs and guns. It is a school where the dress code forbids wearing red or blue shoelaces for fear of riling gangs that claim those colors. In 1986 the city identified this school as one of the 20 lowest achieving of its 650 schools.

A New Approach

But for the past two years the 99th Street school has been trying out a new approach to educating low-achieving children. Instead of "teaching down" to them, it reversed course and set high standards in hopes that the children would rise to meet them. Instead of prodding students through remedial drills and worksheets, teachers began exposing them to heavy loads of literature, research, problem solving and analytical discussion—material and methods that most schools reserve for the most academically successful.

Henry Levin, a Stanford University education and economics professor, has pioneered the idea and helped set up scores of "accelerated schools." Since

1986, his network of accelerated schools has grown to 150 in 17 states. The number will double to 300 at the start of next school year, he says, including a few middle schools and an entire district in San Jose, California. Their motto: "Don't remediate. Accelerate."

Mr. Levin's experiment is based on the premise that all children can learn well and that methods traditionally reserved for the brightest children can stimulate and excite the least accomplished youngsters. Give students "Charlotte's Web" or even Shakespeare instead of Basal readers, the theory goes. Let them work in groups, even if they have discipline problems. If fifth graders are performing at third-grade level, don't give them third-grade work; they'll never catch up.

No Magic but...

While accelerated schools aren't a magical serum for the education of low-achieving children, the program has won praise from Education Secretary Lamar Alexander and others as a way of reaching such students. About a third of the nation's 46.2 million schoolchildren are considered "at risk"—likely to drop out eventually—and the number is growing.

More and more educators are concluding that the remedial classes into which these children have been customarily funneled are ineffective, even damaging to their educational progress. "These kids are stigmatized," Mr. Levin says. "Their education has been reduced to a very boring repetitive approach, and they get further and further behind."

What is now the 99th Street Accelerated School used to be that kind of place. Children sat in rows, hunched over workbooks and worksheets repeating words such as cat, hat and mat. They fought; teachers recall breaking up at least six tussles a day in the schoolyard. Students were bored, restless and insecure.

The Principal's View

Today, "they are positively more motivated," says Althea Woods, the principal. Fights are rare. All grades read real stories and books, such as "Dragon Wings," a story about Chinese immigrants in turn-of-the-century San Francisco. They don't just drill and recite anymore. To help them understand and interpret what they read, one teacher has students pretend to be a character in their books. The other students fire questions.

Children in some classes get their spelling words from poetry, not workbooks, or from events in their lives. In one class, a fourth grader recites the words to a limerick. The test scores of another student, La Tasha Williams, have gone from 30s and 40s to a 74, 82, 95 and 79.

The students discuss current issues. This day, a sixth-grade class is learning about the American legal system. The First Amendment to the Constitution is written on the chalkboard. Students sit at small tables arranged in groups. No textbooks are in sight.

The teacher, Carol Wiersma, poses a question: The school's students decide to wear green armbands to protest the verdict acquitting police in the beating of Rodney King; but Mrs. Woods, the principal, forbids them to wear the bands; the students sue. Who will win the case?

"The students weren't protesting violently. Mrs. Woods is violating the civil rights of a person and the Constitution," says a girl named Sandra.

"What right did she violate?" asks the teacher.

"Freedom of speech."

"Protected where?"

"The Bill of Rights," says another student.

"Which part of the Bill of Rights?"

On the discussion goes, with nearly every student joining in—a pattern seen here by many teachers. "The enthusiasm of the kids has picked up a lot," says fourth-grade teacher William Sullivan. "Participation is up 100%."

Mr. Williams, who teaches the 10th-grade science lesson to sixth graders, says the harder lesson engaged his class in a way that simply pointing to a diagram of a cell wouldn't. "I had the knowledge. I felt I could convey it, pass it along to them," he says. The challenge, he adds, is "competing with their Nintendos" for their attention.

The students say they see a difference in their teachers. "They don't just give you some gobbledygook and tell you to do it," says Garland Brown, a 12-year-old who lives with his grandmother, younger brother, three cousins and great aunt. Garland started going to 99th Street last year. In his old school, he says, "The teacher did more talking, but I really didn't understand. Here in this school they tell you what it's all about, what's really going on." His grades have improved from F's, D's and C's to A's, B's and C's.

Long Way to Go

But 99th Street still has a long way to go. Many students still perform far below their grade level. There clearly has been improvement, however. The school's average reading score for all grades on the California Test of Basic Skills rose to the 23.4th percentile in 1991, the end of its first year as an accelerated school, from the 15.9th percentile in 1990. In math the gain was even greater; the average student score jumped to the 34.4th percentile from about the 22nd.

Mr. Levin believes it takes six years to see the full effects of accelerated teaching. In schools that have used the technique longer, the gains have been striking. In 1986 the Daniel Webster School in San Francisco ranked 65th out of 69 city schools in test scores. Last year, after five years as an accelerated school, it ranked 23rd. In every subject Daniel Webster achieved the largest one-year test-score improvement of all San Francisco schools.

Similar gains were seen at the Hollibrook Accelerated Elementary School, in an immigrant community in Houston, where 80% of entering students speak no English. Before the accelerated program began in 1988, the mean score for reading, math and social studies by fifth graders was at a level equal to the eighth month of third grade. By last year, it had come up to grade level.

"There is now a very solid body of research that shows the most important things in terms of kids doing well in school are high expectations, rigorous curriculum and parental involvement," says Diane Ravitch, assistant secretary at the U.S. Department of Education. "A rigorous curriculum says to a child we're going to put you in algebra because we believe you can learn algebra."

Risks Noted

Accelerated teaching hasn't attracted major criticism, but educators do note some of its inherent risks. They caution that teachers must take care not to overwhelm children with material that is far beyond their abilities. "It has to go hand in hand with meeting the individual remedial needs of kids," says Christopher Cross, a former Education Department official who now directs the Business Roundtable's Education Initiative.

The approach isn't a cure-all for underachieving students. Arnold Fege, an official at the National PTA, applauds the program but says many of the students don't get proper reinforcement at home. "There needs to be more coordination between the home and the school," he says.

The accelerated method came to the 99th Street School through Chevron Corp., which has given Mr. Levin's program $1.45 million to set up training centers at colleges of education in Los Angeles, New Orleans, San Francisco, Seattle and Houston. The Los Angeles center, at California State University, set out to find a pilot school to start an accelerated program.

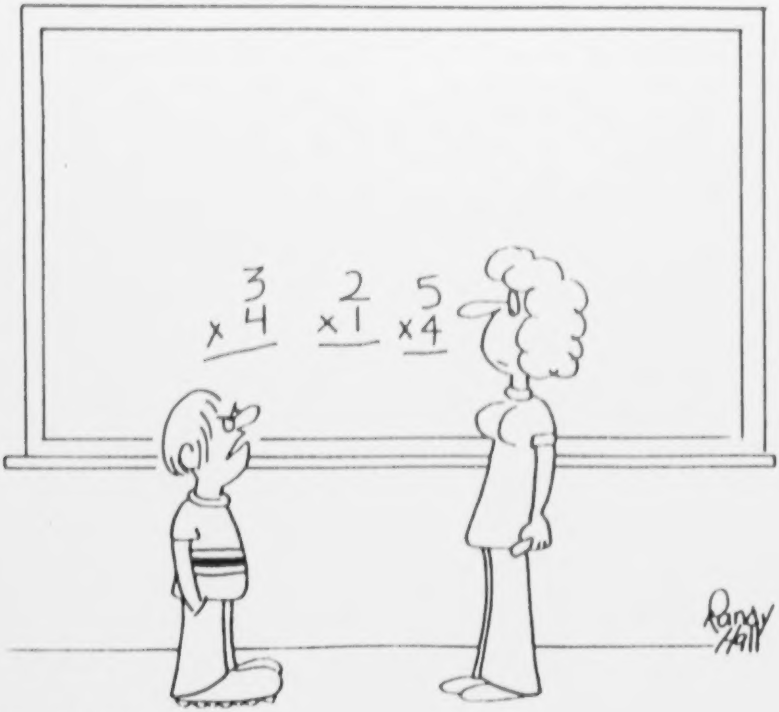
It was looking for an elementary school with a student body that was largely minority, largely at risk of eventually dropping out and largely low-achieving. It also wanted a principal who was innovative and fairly new to the school. The 99th Street School, where 67% of the 700 students are black and 33% Latino, and 85% are eligible for the federal government's free lunch program, fit the bill.

The 99th Street School is a sprawling complex of tan stucco classroom buildings and concrete playing fields enclosed by a chain-link fence. Next door is a water and power plant where National Guard troops stood watch after the riots. Spindly palm trees line the surrounding streets in the neighborhood of small one-story homes protected by window bars.

Mrs. Woods, the principal, has done her best to make the school bright. She pestered the district bureaucracy until it brought in fresh paint. The halls showcase student writing and artwork: poems on spring, tissue-paper flowers, essays on black inventors and crayon sketches of burning buildings and people shooting guns.

Confidence building plays an important role in the accelerated technique. "I tell [students] how great they are," says Anthony Jackson, who teaches a joint fifth-and-sixth-grade class. In dealing with a fourth grader who reads at the first grade level, Mr. Sullivan says he'll give the student individual help, and then will call on him in class when he thinks the child knows the answer. "So he'll have success," the teacher explains.

Fausto Mascorro, 13, a sixth grader in Mrs. Wiersma's class, used to hate school and got C's in science. He is now getting A's in the subject and wants to go on to college. "Mrs. Wiersma told me I can do anything," he says. "Anybody in my class can." ◄



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"I'm not an underachiever. You're an overexpecter."

Review of Research on Curriculum and Instruction in Literacy

by Michael S. Knapp and Margaret Needels, SRI International

Reprinted from *Better Schooling for the Children of Poverty: Alternatives to Conventional Wisdom*, Vol. II, U.S. Department of Education (January 1990).

In this section, we focus primarily on curriculum and instruction in literacy, as it is—and can be—taught to disadvantaged students. Our emphasis is on instructional practices that are unique to this content area. Findings that reflect more generic knowledge about teaching are not discussed extensively here.

We divide literacy into two parts, one dealing with reading and the other with writing, but note that the two are closely related. Popular notions view the two as similar processes of constructing meaning. Reading and writing not only share a common communicative function, but also provide the basis for developing a system of personal thought (Langer, 1986). Both reading and writing involve an interaction between mind and text, and it is this interplay that leads to new knowledge, interpretations, and conceptualization.

This view of the role of reading and writing in the development of personal thought suggests a broad definition of literacy—one that goes beyond the set of functional skills required by routine life experience to include the capacity for thinking and reasoning that has come to be associated with highly developed literate behavior. At this level of proficiency, literate individuals are expected to be able to read many kinds of text with ease, understand their overt and covert messages, interpret them, and reason effectively with the written material at hand. They are also expected to be able to move beyond narrative and summative writing to more lengthy analytic writing.

However defined, underlying conceptions of literacy have a great deal to do with what one views as appropriate curricular content, teaching approach, and measures of effectiveness, even at the earliest grades in school. These in turn represent something more fundamental: what we deem to be sufficient skills in literacy. Because narrow functional conceptions of literacy can easily lead to a truncated curriculum that limits the future growth of disadvantaged students, we have approached this review assuming that literacy curriculum and instruction for disadvantaged students can and should include a broad set of competencies in the use of language, though not so broad as to sacrifice depth of coverage.

Overarching Issues

Before discussing the literatures that pertain to teaching reading and writing, we note five issues that apply to all aspects of literacy instruction for disadvantaged students. The issues are: (1) the purposes of literacy instruction for disadvantaged students, (2) the relative emphasis on (and relationships among) "basic" and "higher-order" skill components in the literacy curriculum, (3) the accommodation of students' linguistic and cultural backgrounds in literacy curriculum and instruction, (4) how the different elements of the literacy curriculum are integrated with one another, and (5) the amount of literacy instruction low-achieving disadvantaged students receive. A few words about each issue serve to introduce the discussions of curriculum content and instructional practice that follow.

The Goals for Literacy Instruction Aimed at Disadvantaged Students—It is easy to assert that disadvantaged students should all receive the same curriculum and instruction in reading and writing as other students, but the practical realities of teaching—especially in schools serving large proportions of such students—often lead educators to adopt more modest goals. Either explicitly or implicitly, literacy instructors in such settings are often satisfied if they can get most students to a level of minimal, functional literacy. Critics, on the other hand, worry about the "watered-down" or "differentiated" curriculum available to such students who, they assert, are capable of more (Moll, 1988). Research on the effects of differential expectations by teachers suggests that the critics' concerns are in some degree warranted. The crucial issue is whether to aim high or low when dealing with a population of students who appear, at first glance, to have little proficiency in literacy skills.

The Relative Emphasis on "Basic" and "Higher-order" Skill Components in the Literacy Curriculum—There is no universally accepted distinction between higher- and lower-order skills in literacy, or, for that matter, in any other area of the curriculum. Some scholars even dispute whether the distinction is useful at all (Resnick, 1987; Schrag, 1989). Nonetheless, most literacy scholars and educators would agree that when students draw inferences from written text, interpret what they read, or construct extended, coherent text, they are involved in a higher-order—that is, intellectually more demanding—activity than when they reproduce the sounds that correspond to commonly encountered phonemes, write simple descriptive sentences, or match vocabulary words with their definitions. Also, at any level of complexity, novel or unfamiliar reading and writing tasks require a more sophisticated capacity to construe and solve the problems posed by the tasks—that is, a "higher-order" skill—than do routine tasks.

At issue is the degree of emphasis to be placed on each level of skill, the desirability of teaching these skills separately from one another, and the timing of teaching them. At one pole of debate on this issue, scholars contend that disadvantaged students tend to need more attention to "basic" literacy skills (e.g., decoding, grammar, vocabulary recognition), of which they typically demonstrate less mastery, and that these skills must be acquired before higher-order skills (e.g., comprehension, text construction). At the other pole, scholars assert that basic skills are not a prerequisite to higher-order skills and that too much attention to basic skills may be counterproductive—by leaving too little time for work on comprehension or composition, providing few opportunities for applying spelling or phonic skills, or reducing student motivation to learn to read or write.

Accommodating the Students' Linguistic and Cultural Backgrounds—Because disadvantaged students include a disproportionate number of those from linguistic minority or nonmainstream backgrounds (e.g., ethnic minority as well as poor white children), literacy instruction, which centrally involves the use of language, must take account of these facts. At issue are (1) ways to make instruction in decoding, spelling, etc., intelligible to those whose sound systems don't correspond to standard English; (2) the degree to which dialects or other languages should be permitted in literacy instruction; (3) the manner in which errors that stem from these sound systems are handled, for example, in ways that respect—or denigrate—the student's background (see Scott, 1988; Moll, 1988); and (4) the inclusion of content in literacy instruction that is meaningful in terms of the student's own experience. The spectrum of approaches to these issues is wide, ranging from strict insistence on correct standard English to the inclusion of other languages in bilingual education approaches.

Integration of Elements in Literacy Curriculum and Instruction—The more literacy programs focus on skill deficiencies and prescriptions for overcoming them, the more segregated or "fragmented" the curriculum is likely to become (other factors discussed below also encourage the fragmentation process). Embedded in such programs is the assumption that a systematic attack on the component skills, which disadvantaged students often have not mastered, is precisely what these students need. On the other hand, making the different elements of the literacy curriculum work together seems especially important for disadvantaged learners, who may have fewer chances outside of school to integrate and apply what they are learning about writing sentences, pronouncing phonemes, analyzing story structure, etc. (Johnston, Allington, and Afflerbach, 1985). Some observers argue that this is doubly important for those among the disadvantaged population who receive part (or all) of their literacy instruction from a supplementary program of some kind: the incoherent nature of the curriculum may be as much a cause of disadvantaged students' failure to learn as anything.

The Amount of Literacy Instruction for Low-achieving Disadvantaged Students—A simple way of approaching the matter is to assert that by providing low-achieving disadvantaged students more literacy instruction than is typically offered the student population as a whole, schools will overcome the disadvantage such students encounter. This position states in the starkest terms the theory underlying compensatory education, which by law and intention seeks to offer extra instructional help to disadvantaged students who are also poor readers or writers. On the whole, such programs do not appear to increase reliably the amount of time students spend in literacy instruction (e.g., Rowan, Guthrie, Lee, and Guthrie, 1986). Schools with the highest concentrations of poor children tend to put less time into literacy instruction than other schools (Birman et al., 1987). In addition, there appears to be less time devoted to teaching writing to all students than many believe to be optimal, as recent NAEP findings suggest (LaPointe, 1986). Clearly, however, the absolute amount of time in instruction is not the only critical variable. As one scholar has observed, "The most efficient way to resolve a learning difficulty is not to double the amount of ineffective instruction."

Reading

Within the vast literature on the content, teaching, and learning of reading, a good deal of research bears on curriculum and instruction that is appropriate to disadvantaged students. We begin by reviewing briefly the principal categories of approach to teaching reading and the conceptions of learning to read that underlie them. From there we turn to typical content and practices in reading programs for the general population as well as for disadvantaged students. Last, we summarize and synthesize what is known about effective instruction and curriculum in this subject area.

Approaches to Teaching Reading

Approaches to designing and implementing reading instruction can be arrayed along a continuum ranging from those that disaggregate reading into its component skills to those that emphasize the integration of language skills in activities aimed at the purposeful use of language. We distinguish three points on this continuum, though in practice a greater number of permutations exist within the field. We also note that the differences between particular approaches are neither simple nor unidimensional; nonetheless, the continuum we describe serves to capture some of the most salient distinctions as these apply to the task of teaching disadvantaged students.

- **Discrete-skills approaches.** At one end of the continuum, a pervasive set of approaches treats reading as the mastery of specific skills (e.g., Osborn, Wilson, and Anderson, 1985), the assumption being that once these "building blocks" are in place, the student will be able to make sense out of written text. These approaches put great emphasis on decoding—that is, breaking words and simple sentences into recognizable sound patterns and then reassembling these to deciper meaningful words and thoughts. Students need to be taught these skills in a systematic, formal way, though some scholars (e.g., Chall, 1983) assert that learners can pick up these skills more readily at certain developmental stages. Within this tradition, text materials are typically designed to expose students to skills in a sequential, ordered fashion—exemplified by published series of phonetically controlled basal readers. Decoding skills, vocabulary, and comprehension are typically taught in a step-by-step, "direct instruction" mode.

- **Meaning-oriented reading approaches.** In the middle of the continuum, other scholars (e.g., Duffy et al., 1987; Collins, Brown, and Newman, 1987) emphasize the search for meaning in written text from early in the process of learning to read and deemphasize (or sometimes ignore altogether) practice with decoding skills. The types of text to be read can vary considerably in this tradition and may include basal readers, child-appropriate literature, or text generated by the students themselves (e.g., stories transcribed by the teacher). Within this tradition, teaching approaches vary considerably but include a good deal of explicit, active teaching alongside student-initiated activity.
- **Integrated language approaches.** At the other end of the continuum, approaches also emphasize reading as the construction of meaning, but do so as part of activities that integrate reading, writing, and other forms of communication. Instruction based on "whole language" philosophies are the principal example of this category of approach (e.g., Altwerger, Edelsky, and Flores, 1987). These approaches seek to embed reading in a broader set of communicative activities that convey to the learner clear and important purposes for communication. Students' motivation for learning to read and the practice they get in reading skills arise naturally out of activities that involve written and other forms of expression. The teacher's role becomes more that of a facilitator; students are given greater responsibility for mastering and creating authentic texts.

The relative appropriateness of these approaches for disadvantaged students is a matter of debate. Although it is tempting to resolve the debate in favor of one or another approach, this is probably not a fruitful exercise. The actual payoff to students of any given instructional approach probably depends on more than the distinguishing attributes of the approach itself; factors discussed…[elsewhere, such as classroom management and instructional strategy factors] have as much to do with the net benefit to a given group of students.

Nonetheless, some observations can be made about assumptions and trade-offs implied by the different categories of approach. First, the approaches typically rest, explicitly or implicitly, on different assumptions about the process of learning to read. Integrated language approaches, for example, tend to assume that learning to read is a natural process; by repeated exposure to authentic reading material in properly motivated circumstances, most learners will acquire the appropriate skills (Goodman and Goodman, 1979).[1] Other categories of approach tend to assume that the learning process occurs in response to formal instruction that provides learners what they otherwise would not come by—in particular, discrete skills (e.g., Osborn et al., 1985) or structures for thinking and knowing (Calfee and Drum, 1986). Second, different instructional approaches structure the content of the curriculum differently: discrete-skills approaches fractionate the content, leaving the integration of skills up to the learner—a possible sacrifice of the whole for the parts. At the other end of the continuum, integrated language approaches maintain the integrity of the content as a meaningful whole, but with the possible loss of mastery of particular skills—a sacrifice of the parts for the whole. Third, the approaches typically put the locus of responsibility for managing the learning process in different places, with discrete-skills approaches placing it with the teacher and integrated language approaches placing it with the student, while the teacher assumes a facilitative, enabling role. Finally, as one moves along the continuum toward integrated language approaches, more is required of the teacher. To share with students control over learning tasks, to push students beyond the surface reading of words to their meanings, to set up and facilitate situations in which reading (and writing) arise as natural and purposeful acts—all these goals assume sophistication on the teacher's part, which in the real world of schools is not always present.

The Typical Pattern of Reading Curriculum and Instruction in Grades 1–8

The three categories of approach are not found in equal proportion among schools. For a variety of reasons, the typical pattern of reading instruction in grades 1–8 favors discrete-skills approaches, and to a lesser extent meaning-oriented approaches (although there is gradual movement in that direction). This happens both in the intended reading curriculum—the design of instruction embedded in published materials, frameworks and syllabi, and tests—and the enacted reading curriculum—the delivery of instruction within classrooms.

The Intended Reading Curriculum—To understand what schools set out to teach students in reading, one needs to look at the curriculum designs embedded in published reading materials, the district and state curricular frameworks or syllabi that govern what teachers are expected to do, and the tests that reinforce and account for the results of teaching.

The design of most contemporary reading materials (workbooks, readers, teachers' manuals, software) rests on the assumptions and learning theories implied by discrete-skills or meaning-oriented approaches. Although reading materials in current use for grades 1 through 8 take a great many forms, by default or by design their content falls into a predictable pattern (see Calfee, 1986, for an overview of this pattern). First, the materials structure the content in terms of a fixed sequence of skills to be learned. The materials often heavily emphasize phonetic decoding skills, the assumption being that these skills form the strongest foundation for later reading. Alternatively, the materials deemphasize decoding—e.g., by introducing new words that don't correspond to a phonetic sequence—but still maintain a fixed structure for introducing increasingly complex text. Second, the materials include a great many repetitive, out-of-context drills to establish these skills, typically through workbook exercises designed for individual seatwork (Anderson, Hiebert, Scott, and Wilkinson, 1985). Third, the materials either provide few stimuli to help students probe text for meaning or a great many "comprehension" questions that may detract from the reading itself. Fourth, vocabulary-controlled and graded basal readers form the primary text to which students are exposed in the lower elementary grades; in the upper elementary and junior high school grades, the reading fare is more varied but generally has a dearth of interesting texts available to the disadvantaged reader.

Although they are clearly a major factor, the designs of contemporary reading materials alone do not determine what is taught to disadvantaged students. Other forces play an important role, among them (1) instructional philosophies and curricular decision making at both the teacher and district levels; (2) the "content" of tests, to which curriculum planners and teachers often orient their instruction (Carbo, 1988); (3) state curricular guidelines and mandates; and (4) the fact of extensive government investment in remedial and compensatory reading programs. For various reasons, these forces tend to reinforce the same "discrete-skills" assumptions about the teaching and learning of reading that are embedded in published materials. For one thing, teachers often take the textbook as the basic structure for their teaching (published reading materials include teachers' manuals that encourage this practice). For another, multiple-choice standardized testing can most easily capture discrete skills (Carbo, 1988). In addition, accountability-minded educational agencies at the state and local levels tend to create reading/language arts frameworks and syllabi that are easily tested.

The Enacted Curriculum—The teaching of reading to all students, disadvantaged or otherwise, tends to emphasize the discrete-skills emphasis of the materials, tests, frameworks, and syllabi. In brief, the predominant pattern of reading instruction in lower elementary grades can be summarized as follows (based on Calfee, 1986):

1. Reading is a separate subject from "language arts" (which typically include various topics such as spelling, grammar, story writing, etc.).

2. Instruction tends to follow the sequence laid out in basal reading series and related materials, in particular, student workbooks and teachers' manuals.

3. A large proportion of instructional time is devoted to individual seatwork aimed at practicing these skills—perhaps two-thirds of the typical reading period (which allows the teacher to work with small reading groups one at a time).

4. Students typically receive reading instruction in small ability-based groups for a portion of the reading period. In groups, students take turns reading aloud to the teacher. The relative proficiency of these groups is well known to the class as a whole and is a basis for social ranking among students.

5. Instruction in reading "comprehension" is not extensive, and does not involve much thinking about, or working with, the text.

6. Assessment of reading instruction (a) reinforces the discrete-skills emphasis of instruction; (b) emphasizes recall and the location of information rather than understanding; and (c) tells relatively little about what students really know.

In the upper elementary grades, many elements of this pattern continue, especially for the poorer readers, who are felt to need further work in building their "basic" reading skills. For the better readers, the "reading" and "language arts" classes become increasingly more oriented to literature and composition, and the two are combined in a subject called "English." In addition, reading becomes a tool in other areas of the curriculum, especially social studies and science, but also mathematics. By junior high school, the transition is complete. Students typically are attending separate, tracked classes in "English," which generally are differentiated by the students' proficiency in reading and writing and which pursue curricula aimed at different ends. At the high end of the student proficiency continuum, the curriculum aims at preparing students for high school college preparation tracks (whether or not such tracks are formally declared), and at the low end for participation in vocational educational or other equivalent activities.

There are, of course, many variations on the theme, as well as substantial deviations from the pattern where educators subscribe to approaches that emphasize a meaning orientation or whole-language approach, but the practices we have described are widespread enough to form a conventional wisdom about the teaching of reading that is often unquestioned.

Taken together, the pattern of intended and enacted curriculum just described is a source of concern to many educators. Efforts to reform the teaching of reading have zeroed in on a number of assumptions underlying this pattern and have advocated a substantial shift away from discrete-skills approaches (Anderson et al., 1985). Findings from the National Assessment of Educational Progress (LaPointe, 1986; Applebee, Langer, and Mullis, 1988) further support the contention that, overall, current curriculum and instruction in reading may not challenge students sufficiently. These concerns have prompted some states to develop altogether different frameworks emphasizing meaning-oriented or integrated language approaches (e.g., California State Board of Education, 1987).

Curriculum and Instruction for Disadvantaged Students

The pattern is more pronounced in schools and classrooms serving large numbers of disadvantaged students, and is complicated by the various remedial or compensatory arrangements for helping students in these schools who have trouble learning to read and write. As critics have pointed out, this instructional pattern appears to work less well for disadvantaged students than for others.

Much of what we know about the curriculum and instruction to which disadvantaged students are exposed derives from studies of compensatory reading programs and from the literature on poor readers. From this literature, we can construct the following picture of the enacted curriculum in reading available to this student population.

The primary content of the reading curriculum, as conveyed to most disadvantaged learners, is a set of disaggregated language skills that lack meaning and coherence. The disaggregation or "fragmentation" of reading that all students experience in some degree is more pronounced in classes serving large numbers of disadvantaged students for several reasons. First, these classrooms have a high proportion of students who have not mastered the discrete skills that many teachers presume to be the building blocks of reading facility. Naturally enough, teachers often redouble their efforts to teach these skills. Second, disadvantaged students are less likely to have been exposed to certain prerequisites for reading skill—e.g., the Standard English vocabulary that appears in written text. Accordingly, teachers set out to teach this vocabulary in a more systematic way, which typically means more vocabulary lists, more workbook assignments. Third, teachers' failure to take into account the sound systems students bring to school—e.g., embedded in non-Standard English dialects or other languages spoken at home—makes the learning of skills such as phonics more difficult for many disadvantaged students (Scott, 1988). Once again, teachers' most natural response is to work even harder on the phonic skills in ways that confuse students or deprive them of opportunities to acquire other reading skills. Finally, disaggregating the content of reading into discrete skills lends itself to the multiple-setting instructional arrangements encouraged by separately funded supplementary programs, for example, by giving students help with decoding in the Chapter 1 resource room and leaving comprehension to the regular classroom. The result is that disadvantaged students have relatively less chance to "put it all together" and to apply what they are learning to meaningful and engaging activities involving written text.

Disadvantaged students are exposed to reading curricula that reflect limited resources and generally low expectations for their performance. Schools that serve large numbers of working-class and poor children typically provide instruction that differs qualitatively from what is offered to children from more affluent backgrounds. One observer summarized a series of studies that indicate that "in general [working-class and poor] children receive rote, drill and practice instruction, work that is highly structured and redundant" (Moll, 1988). Studies that compare instruction across social class lines suggest that, by contrast, students in affluent communities are more likely to receive instruction that promotes analytical abilities and a higher level of literacy skills (Anyon, 1981; Oakes, 1984). Resources for reading instruction—for example, readers, workbooks, computer software—are often less plentiful in schools serving large concentrations of disadvantaged students.[2] This has the effect of narrowing the range of reading content or the types of learning experiences these students may have. In addition, it is well established that teachers often expect less of students who bear some distinguishable sign of disadvantagement (e.g., limited English proficiency, ethnic background).

Teachers tend to treat poor readers in ways that may compound the problems these students have with reading. Research on poor readers suggests that they are taught differently than their more advantaged counterparts. Some might argue that these differences are justified; students who feel defeated by a page of text, for example, are not necessarily ones who should be asked to read long works. But a number of scholars are concerned that the differences in instructional practices such as the following may work against their learning to read:

- Teachers tend to interrupt poor readers more often than good readers to correct the same kinds of mistakes, with the effect that poor readers get less practice developing fluency and less chance to learn self-correction skills.
- Teachers tend to ask poor readers fewer comprehension questions, so that such students are made to think less about what they are reading (e.g., Walmsley, 1986; Moll, Estrada, Diaz, and Lopes, 1980).
- Poor readers typically have fewer opportunities for silent reading (Applebee et al., 1988); their oral reading experiences put them "on show"—which exposes their failures to others on a regular basis.
- Poor readers tend to have a narrower range of appropriate texts to read and are allowed to exercise less discretion in selecting what they will read than good readers. This pattern reflects, in part, the paucity of good, interesting materials for beginning readers: for example, basal reading series still do not contain sufficient material that reflects life experiences of minority and disadvantaged children.

These practices are understandable, if misguided. Teachers are naturally wary of asking too much of a poor reader, but in trying to correct errors and construct manageable learning tasks, they risk asking too little or depriving the activity of intrinsic interest or meaning. Because disadvantaged students include a disproportionate number of poor readers, this danger has grave consequences for this student population.

Supplementary instruction adds different materials, instructors, settings, and group contexts and, as a result, makes the reading program for disadvantaged students more complex. Poor readers among the disadvantaged population are often exposed to two sets of reading materials, with varying degrees of congruence between them (Johnston et al., 1985). Moreover, supplementary program instructors—whether reading specialists, aides, or others—represent another set of adults with whom students must establish a relationship. Some evidence suggests that these individuals are not always knowledgeable about what is being done in the regular reading classroom. More often than not, supplementary instruction takes place in a separate setting from the regular classroom, such as a pullout or resource room, though there are various in-class models for conducting this kind of instruction. Typically, students are assigned to supplementary instruction in small groups that, in effect, label the student as a "poor reader."

Effective Reading Curriculum and Teaching for Disadvantaged Students

There is more agreement among scholars about the typical state and inadequacies of current reading practices than about what to do to improve the situation. Three streams of research serve to summarize variables believed to be related to effective reading curriculum and instruction for disadvantaged students. The three streams of research focus, respectively, on (1) "direct instruction" approaches, (2) ways to improve remedial reading instruction, and (3) active, comprehension-focused reading instruction. Taken together, these studies point to different variables, depending on the teachers' and schools' instructional goals.

Research on the efficacy of "direct instruction" in reading to disadvantaged students has its roots in the national Follow Through Evaluation of the early 1970s; a number of studies picked up the findings of this research and explored them further. The approaches studied took the teaching of basic reading skills as the principal goal of instruction. The model of reading instruction espoused or implied by these works emphasizes:

- **An emphasis on lower-level literacy skills.** Thorough grounding in decoding skills and vocabulary, as a first step, to compensate for students' nonstandard linguistic backgrounds or presumed lack of exposure to the vocabulary typical of introductory reading materials.
- **Rapid pacing and small, manageable increments of new material.** Carefully sequenced instruction that introduces new skills in small, manageable steps at a relatively rapid pace (Barr and Dreeben, 1984; Allington, 1984).
- **A directive role for the teacher.** Whole-group instruction actively controlled by the teacher.
- **Demonstration-practice-feedback cycle.** A repeated cycle of demonstration of new reading skills, such as the recognition of phonetic patterns, practice with these skills, and frequent corrective feedback to the student regarding the mastery of these skills (Rosenshine and Stevens, 1984).
- **Maximized opportunity to learn.** School decisions (e.g., regarding time allocation) and efficient teaching practices that maximize students' opportunity to learn reading and their engaged learning time in the pursuit of this set of skills.

Recent research and commentary call into question some of the elements of this model. This approach to teaching reading is probably effective at teaching basic decoding skills and the recognition of vocabulary words to disadvantaged students, but it may do little to improve comprehension and may even inhibit it (Calfee, 1986). For poor readers, in particular, the approach may also lead unwittingly to the pattern noted above of repetitious instruction in decoding skills for the poorer readers. Increasingly, reading scholars are abandoning the linear/sequential view of the language learning process that underlies this mode for an interactive, constructivist view (Bridge, 1987; Anderson et al., 1985). In this view, the learner constructs meaning from text, drawing on various sources of information. The process simultaneously involves higher-order and lower-order skills, even for students at the earliest stages in learning to read (Resnick, 1987). Thus, designing curricula that proceed in a linear way from simple, basic skills to higher-order skills may fail to engage students sufficiently.

Research that focuses on the poor reader and remedial or compensatory programs suggests ways to improve on this model without contradicting it altogether. Implicit in much of the research on remedial and compensatory reading instruction to date is the assumption that these programs are concerned primarily with increasing students' basic skills in reading. While reinforcing the emphasis on certain variables from the first tradition (e.g., the amount of time allocated to reading: poor readers need more of it than others), this body of work concentrates on other variables, among them the following:

- **The nature of corrective feedback.** The manner of the teacher's corrective behavior: e.g., reducing the number of interruptions during oral reading (Allington, 1980).
- **An emphasis on sustained silent reading and the development of fluency.** The opportunity for daily silent reading in addition to, or in place of, oral reading as well as a focus on developing reading fluency (Allington, 1983).
- **Deemphasis on lower-level decoding skills.** Relatively less time spent on worksheet-based practice in decoding skills, vocabulary, etc.
- **Curricular congruence.** Coherence in regular and supplementary reading curricula and instructional approaches (Johnston et al., 1985).

The adjustments to curriculum and instructional approach implied by the preceding list may not go far enough if schools and teachers take comprehension, which many take as fundamental to successful reading (Anderson et al, 1985), as the primary goal of reading. That goal—facilitating the students' construction of meaning from written text—may be better served by active attempts to teach comprehension strategies as well as to provide opportunities for students to interact with a wide range of written text (Pearson, Dole, Duffy, and Roehler, 1990). In particular, such instruction might be characterized by explicit efforts to teach students to (1) determine what is important, to the reader and the author, in written text; (2) synthesize information across large units of text (Brown and Day, 1983); (3) use and alter prior knowledge in seeking to understand text (Roth, 1986); (4) draw inferences from text (Pearson, 1985); (5) pose questions of each other during and following the reading of text (e.g., Palincsar and Brown, 1984); and (6) monitor their own comprehension (e.g., Clay, 1987).

This kind of strategic focus implies further amendments to the research-based model of effective reading instruction described above. From this perspective, disadvantaged students are likely to be better served by:

- **Active, comprehension-focused curricula that emphasize meaning from the earliest stages.** This does not mean, however, that teaching decoding skills is unimportant, but rather that decoding is not the primary focus of instruction; instead, decoding is viewed as one of several tools to help students construct meaning.

- **Exposure to a wide variety of text,** with less (or no) use of phonetically controlled or vocabulary-controlled basal readers.
- **Instruction in which students are a resource for one another's learning,** for example, as reading partners or as group critics and facilitators in "reciprocal teaching" approaches (Palincsar and Brown, 1984).
- **Instruction in which teachers play an active role, as in direct instruction models, but with greater emphasis on explicit teaching of comprehension strategies** (Duffy et al., 1987).
- **Learning activities that place reading in the context of a real task or application,** thus providing the student with a compelling reason to read.

Many of these elements are found in integrated language approaches, but there remains little evidence to date regarding the positive or negative effects of such approaches on disadvantaged students. Some critics wonder whether the implied teaching approach, often indirect and facilitative, will work well with this student population.

Writing

In many respects, the literature on the content and teaching of writing in elementary and junior high schools parallels that of reading. As discussed above, reading and writing share a common cognitive core; thus, we approach the review in a similar fashion, although with some differences, which reflect the fact that writing and reading involve different cognitive process behaviors (Langer, 1986). We begin with alternative ways scholars approach writing and argue that a sociocognitive perspective on writing is the most useful for understanding writing curriculum and instruction for students in general and, specifically, for disadvantaged students. Next, we review alternative approaches to writing instruction, examine the theoretical basis for each, and assess their applicability to instructing disadvantaged students. We then examine the writing curriculum in elementary and junior high schools and the patterns of typical practice. Finally, we review what is known about the effective teaching of writing and draw implications from it for teaching disadvantaged students.

Scholarship in writing over the last decade has helped to articulate the intellectual processes writers employ and has documented to some extent the relationships between these processes and the context in which the learning takes place. Four major strands of research in the field have contributed to this understanding by approaching writing as follows:

- **Writing as a cognitive process.** Researchers following this strand view writing as mainly a problem-solving task (Hayes and Flower, 1980;

Beaugrande, 1984; Cooper and Matsuhashi, 1983). On the basis of observing and interviewing writers, a cognitive model of the writing process has been developed. Subsequent research attempts to identify the manner in which writers with varying characteristics follow this model. Much of this research has focused on differences between expert and novice writers.

- **Writing as a developmental process.** Closely related to the cognitive perspective, other scholars are concerned with the acquisition of written language. Work by such researchers as Graves (1981), Calkins (1979), and Dyson (1983) has increased our understanding of the developmental stages of learning to write. Langer (1986) and others argue that this view is different from the expert/novice studies described above—that an inexperienced (novice) writer should not be equated with a young child in the process of acquiring written language.
- **The social context for writing and learning to write.** The view of writing espoused by another group of researchers has focused on the context within which persons learn to write. This view recognizes the importance of the home, the workplace, the community, and the classroom. Researchers following the contextual view have shown that children learn much about writing before they come to school and this early context must be acknowledged in any discussion of the acquisition of written language (Cochran-Smith, 1984; Taylor, 1983; Teale, 1986; Heath, 1983). These researchers argue that learning to write is not simply skill acquisition, but is learning to enter into discourse communities, which have their own rules and expectations (Freedman, Dyson, Flower, and Chafe, 1987).
- **Writing as a sociocognitive process.** Still other scholars have sought to integrate cognitive and social processes; they recognize that cognitive processes are influenced, in part, by the particular context within which the learning occurs (Langer, 1986; Freedman et al., 1987). The writing process is shaped by both the writer's prior knowledge and the purposes and audiences for a given writing task. In looking at the writing process, the purpose and audience of the writing must be considered. This view thus attempts to integrate the theoretical perspectives of both the cognitive and social context traditions.

Of these strands, we believe the last offers the most powerful concepts for understanding writing curriculum and instruction for disadvantaged students. It explicitly acknowledges the impact of student background and social context on writing processes or learning to write, while including a conception of writing as a problem-solving task that calls for an intellectually complex set of responses.

Given this view of writing, two sets of concerns must be considered before a picture of effective writing curriculum and instruction for disadvantaged students can be developed. As in the case of reading, assumptions about the students' linguistic backgrounds must be considered, since this background provides students not only with a context for, but with varying forms of, expression that shape their view of written communication. And, like reading, writing may serve fundamentally different purposes, depending on the audience, the genre (e.g., storytelling, expository writing, personal communication, etc.) within which the students are working and the level of intellectual performance they are expected to achieve.

Assumptions About Linguistic Background—Deficit models typically assume that differences in the student linguistic backgrounds are a major cause of weak writing performance, and that students of nonmainstream linguistic backgrounds will achieve higher levels of writing if teachers effectively teach the discrete skills needed to write correctly. However, many writing scholars believe that student performance is influenced by factors other than the lack of grammatical and syntactical similarities between the students' linguistic background and the linguistic conventions expected in school-sponsored writing.

Heath (1981) believes students' lack of achievement is influenced, in large part, by the lack of fit between the functions of writing outside school and those served by most methods of writing instruction. Heath maintains that to build effective programs of writing instruction, these out-of-school functions need to be integrated into school-sponsored writing. Hendrix (1981) agrees with Heath and argues that uses of writing outside of school as well as the students' motivation and needs should be considered in school-sponsored writing—that is, school-sponsored writing should not be separated from the personal, social, or political aspects of life. He writes that the most effective instructional efforts will be those that stress "human validity" as well as correctness and clarity.

Others argue that the functional mismatch between community and school tasks is too simplistic an account of disadvantaged students' failure to acquire adequate literacy. Cook-Gumperz, Gumperz, and Simons (1981) argue that all children learning to read and write must learn new communicative strategies. However, learning these new strategies will be especially difficult for children who come from homes where most communication is oral, as compared to those who come from homes where printed language is common. In light of such theory and commentary, it is clear that instruction that focuses only on discrete skills of grammar and mechanics will not address the needs of the disadvantaged child.

Assumptions About Types of Writing and Levels of Literacy—It is widely accepted that the types of writing that are to be learned and the level of literacy to which instruction is aimed greatly affect the content and approach to teaching writing, and ultimately the skills learners acquire. In the case of disadvantaged students, especially those experiencing difficulties in learning how to write, it is tempting for schools to assume that these students only need to learn the kinds of writing associated with lower levels of functional literacy, as discussed at the beginning of this chapter.

These assumptions can severely limit the kinds of skills that disadvantaged students develop in writing instruction and the uses to which they may put the writing. Scholars have long established that different genres of writing are associated with task structures that require the writer to convey different meaning to the reader. More recent writing research indicates that different genres of writing place different cognitive demands on the learner (Langer, 1986). The perceived appropriateness of these demands for particular learners influences beliefs about the goals of teaching writing. That is, the kinds of writing assigned to students and associated instructional goals are influenced by the teachers' perception of the student's ability to master the demands required of the task.

Thus, in several ways, writing instruction for disadvantaged students is influenced by beliefs about the appropriateness of certain kinds of writing tasks and about the way students will use writing outside of school. The writing instruction provided to disadvantaged students may not promote what some authors have described as "high literacy" (Bereiter and Scardamalia, 1986). High literacy, as described by Resnick and Resnick (1977), has been a tradition in the education of the elite. Such a level of literacy is aimed at developing students' linguistic and verbal *reasoning* abilities. On the other hand, low literacy promotes the minimum level of reading and writing and reflects the education that is typically available to the disadvantaged.

Approaches to the Teaching of Writing

The most common approaches to the teaching of writing draw in varying degrees on the base of scholarship about the acquisition of writing skills. Although there are many instructional alternatives associated with particular methods (e.g., freewriting, conferencing, sentence combining, etc.), three broad categories of approach to the teaching of writing can be distinguished that parallel the approaches to teaching reading described earlier:

- **Component skills approaches.** This category of approaches focuses on the discrete skills that are assumed to be the "building blocks" of writing facility: penmanship, spelling, punctuation, grammar, paragraphing, etc. Instruction in this tradition places great emphasis on drills and practice exercises aimed at conveying to students the sets of rules by which written language is correctly rendered.
- **Process approaches.** Another, more recent category of approaches seeks to teach students the process of writing described by expert writers. This category of approach to teaching writing is based on the above-mentioned "writing as a cognitive process" strand of research on writing. This process includes stages such as prewriting, generation of text, critical review of written text, and revision. Instruction in this tradition tends to place much more attention on getting students to generate text and subsequently refine it, during the course of which the "mechanics" of writing are gradually learned. This teaching practice focuses primarily on learners' cognitive activities, rather than on the substance of their texts (Bereiter and Scardamalia, 1982).
- **Whole-language approaches.** A third category of approaches, noted previously in discussing reading, shifts the emphasis onto the meaningful use of language. Following the "whole language" philosophy (Altwerger, Edelsky,

and Flores, 1987), instruction is typically designed to integrate writing with reading and oral expression and to create situations in which students have "authentic" reasons to communicate with the written word. The substance and structure of the writing are of primary concern.

The three categories rest on different theoretical bases and concerns about the teaching of writing. The first presumes that the ability to write grows out of a grasp of mechanics. Rather like discrete-skills approaches to reading, this set of approaches presumes that one must learn "the basics" first, and then one can engage in meaningful and more complex expression. As mentioned above, the belief that the quality of the writing produced by linguistically different students can be enhanced through instruction in grammar still prevails in much of the writing instruction offered to K–12 students.

The second category acknowledges that writing is a complex process and that the stages within this process can serve as the framework for appropriate learning activities. An avalanche of recent research has developed the view that writing is iterative: the writer moves back and forth between the general stages in the writing process. Moreover, subprocesses have been identified under this superordinate process. How to help less competent writers to understand and internalize these processes is a central issue for curriculum developers and for classroom teachers implementing instruction that is driven by a process view of writing.

The third category assumes that, without a meaningful context for communication, neither the mechanics nor the process will be well learned. In this tradition, teachers seek to highlight the contextual components of a given writing task. Among these components are audience concerns and expectations, the writer's purpose, and the conventions associated with a particular form of writing. All of these factors inform the cognitive demands of, and subsequent strategies employed in response to, a writing assignment.

As with the approaches to the teaching of reading, we can make some observations about the appropriateness of these approaches to the instruction of disadvantaged learners. Assuming that "high" literacy is the goal for teaching this student population as for the student population as a whole, the first category of approaches appears to have the least to offer. There is little built into these approaches that guarantees anything beyond a grasp of mechanics. By contrast, the second and third categories seem to suggest teaching approaches more likely to yield higher levels of literacy. In a curriculum aimed at developing such literacy, what is to be learned would most likely come from a purposefully guided construction of, and interaction with, text rather than from the teacher's direct instruction or exercise activities (Bereiter and Scardamalia, 1982).

Writing Curriculum and Instruction in Grades 1 through 8

Curriculum and instruction in writing tend to fall into a predictable pattern that parallels the focus of reading instruction on discrete skills. The pattern appears both in the intended curriculum and as it is enacted in classrooms;

however, unlike reading instruction, which has been greatly influenced by textbooks, writing instruction has not relied as heavily on the structure of published materials.[5]

Intended Curriculum—As in the case of reading, the predominant pattern of curriculum designed for elementary and junior high schools displays the component skills approach discussed above. Unlike reading, however, writing does not always occupy a central position in the curriculum. It has often been observed that in elementary schools, at least, relatively little writing is done at all, and that writing instruction primarily emphasizes component "skills"—the "mechanics" of writing (Pearson and Gallagher, 1983; Graves, 1978). With the exception of language arts materials that deal with language mechanisms, textbooks exert relatively little influence on the writing curriculum, which brings both an advantage and a disadvantage. The advantage is that writing instruction is not so bound by the structure of the texts (except in traditional "language arts" programs), as is frequently the case in reading instruction. The disadvantage is that the classroom teacher has access to minimum guidelines for teaching writing; without a textbook to structure their teaching, many teachers are less likely to offer writing instruction.

The typical writing program in grades 1 through 8—often described as, or subsumed within, "language arts"—seeks to inculcate a set of skills related to the surface features of written text: spelling, punctuation, grammar, paragraphing, etc. The structure of the curriculum varies somewhat from district to district and state to state, but the following ingredients are commonly emphasized: (1) grammar, including sentence parts, sentence structure, and sentence types; (2) parts of speech; (3) paragraph writing; and (4) a hierarchy of genres, for example, writing a letter at the first-grade level and writing a newspaper editorial at the eighth-grade level. A substantial emphasis is given to mechanical correctness. Restricted writing activities (short answer or fill-in-the-blanks) are by far the most common activities and extended writing activities remain infrequent (Applebee, 1984).

A review of five widely used language arts textbooks (conducted for this study) reveals that, in theory, the curriculum (as represented by the textbooks) recognizes the whole-language approach; however, in practice, the integration of writing into the language arts curriculum is minimal. Of the five textbooks we reviewed, one made practically no connections among the various components of the language arts program; a component skills approach was apparent. Some relationships were noted between grammar instruction and writing instruction; however, no relationship was made between reading assignments and students' writing. Writing was treated separately, thus decreasing the authenticity of the writing assignments.

On the other hand, one of the five textbooks followed a literature-based approach to teaching language arts. Writing was an integrated part of the program, offering students instruction in the writing process and an opportunity to interact with a reading text through writing.

The remaining three textbooks we reviewed advocated a process approach to teaching writing and integrating the component parts of writing into a whole-language approach; however, the particular lessons contained within the textbooks did not reflect this kind of integration. For the most part, writing was treated as a discrete skill, relegated to the end of each chapter in the book. Less space and less variety of instruction were given to writing than in the other two texts.

Typically, state and district frameworks and curricular guidelines reinforce the pattern of skills-oriented writing instruction just described. Some states have undertaken an ambitious restructuring of the writing curriculum through frameworks, model curriculum guides, and assessment programs. For example, the state of California has developed (1) a curriculum framework intended to serve as the framework for all district curricula within the state, (2) a statement of curriculum standards intended to give assistance to districts in translating the framework into more specific curriculum goals, and (3) a statewide testing program that is directly related to the state framework and curriculum standards. Several features of this framework illustrate an attempt to redefine the intended curriculum in ways that incorporate principles of writing instruction espoused by whole-language and some process-oriented theorists.

Other state frameworks are beginning to display a similar emphasis, but this has yet to work its way into common practice. In reviewing three states' frameworks (California, Maryland, Virginia), we found striking similarities among these frameworks in terms of their stated goals. All three emphasized the following goals:

- Students will understand and use the stages in the process of writing.
- Students will write for a variety of purposes, developing an understanding of voice, audience, form, and content.
- Students will value writing for personal and social reasons (e.g., as a vehicle for self-discovery and also as a means of empowerment).

Virginia was the only state to identify, as a separate goal, writing for creative expression. Thus, it appears that the formal curriculum, as designated by the frameworks, reflects much of what is popular in current thinking about the teaching of writing. Yet, the teaching strategies for implementing this curriculum have yet to reflect this emphasis.

The Enacted Curriculum—Few studies are available that provide us with a comprehensive picture of how the intended curriculum in writing is translated into classroom writing instruction. The results of the National Assessment of Educational Progress of 1984, reported by Applebee, Langer, and Mullis (1986), included results of questionnaire data asked of fourth-, eighth-, and eleventh-grade students about the management of the writing process and the writing instruction they received. The data from the fourth and eighth graders provide some indication of the enacted writing curriculum occurring in elementary and junior high school classrooms.

The highlights of these results are listed below:

- Most students, majority and minority alike, are unable to write adequately except in response to the simplest of tasks.
- American students can write at a minimal level, but cannot express themselves well enough to ensure that this writing will accomplish the intended purpose.
- Students had less difficulty with tasks requiring short responses based on personal experiences; however, less than 19 percent of the eighth graders and two percent of the fourth graders wrote adequate or better responses.
- Few students understood and considered strategies of the writing process. During revision and editing, a large proportion of students reported that they focus on the mechanics, such as spelling and punctuation.
- Students reported that their teachers are more likely to mark mistakes than to show an interest in what they write or to make suggestions for the next paper.
- Students who report doing more planning, revising, and editing are better writers than those who report doing less.
- Students who reported writing three or more reports and essays during a six-week period had higher achievement levels than students who reported doing no writing during the time period. Twenty-two percent of the fourth graders and 12 percent of the eighth graders reported doing no writing.

The authors conclude that activities oriented toward the writing process have begun to be incorporated into writing instruction; however, the results indicate that these activities have not been carried out in a way that facilitates students' higher-order thinking and ability to think about what they are writing. The authors offer two major recommendations:

- Students need broad-based experiences in which reading and writing tasks are integrated into their work throughout the curriculum.
- Instruction in the writing process needs to focus on teaching students how to think more effectively as they write.

The state frameworks that we reviewed contain goals in alignment with these recommendations; however, the textbooks, although moving in that direction, have not, for the most part, provided instructional guidelines that would promote more complex and elaborated text.

Effective Teaching of Writing to Disadvantaged Students

In contrast to reading research, little research has examined effective approaches to teaching disadvantaged students in writing. However, some studies of the efficacy of instructional strategies for all students and on strategies for teaching writing to linguistically different students give clues to appropriate approaches for disadvantaged students.

Effective Instructional Strategies—Numerous claims are advanced about the efficacy of particular methods of writing instruction, for example, holding conferences (Graves, 1978), freewriting (Elbow, 1973), teaching rhetoric of invention (Young, 1976), and providing opportunities for sentence combining (Mellon, 1969). Others have argued that instead of discussing these specific kinds of instruction, it is more useful to try to develop more general categories of instruction. Hillocks (1986) does this in his meta-analysis of research on the teaching of writing over the past 20 years. He compares four modes of writing instruction:

- *The presentational mode* is characterized by (1) clear and specific objectives, (2) lecture and teacher-led discussions, (3) the study of models that illustrate a concept, and (4) specific assignments.
- *The natural process mode* is characterized by (1) generalized objectives, (2) freewriting, (3) writing for audiences of peers, (4) opportunities to revise, and (5) high levels of interaction among students.
- *The environmental mode* is characterized by (1) clear and specific objectives, (2) materials selected to engage students with each other in specific processes important to some aspect of writing, and (3) high levels of peer interaction.
- *The individualized mode* is characterized by (1) students receiving instruction through tutorials, and (2) programmed instruction.

In his meta-analysis, Hillocks (1986) included only studies that used both pre- and posttest student writing samples to assess effectiveness. Thus, only a small proportion of the available research was included; this review is limited by the small number of studies included in each category. These small numbers did not allow more discrete meta-analysis of these categories by age of students, economic status, or other student characteristics that are of interest in the present study. Overall, his meta-analysis indicated that the environmental mode was far superior to the other three approaches. The distinguishing characteristics of this mode of instruction—in particular, the emphasis on group interaction and clear and specific objectives—apparently seem more able to engage students in activities that promote good writing skills. However, an effective, balanced program is likely to draw appropriately from all four modes.

Whatever the category of writing instruction, Applebee and Langer (1983) argue for a "substantive" rather than "procedural" approach to teaching writing. Rather than stressing the component skills of writing, the authors advocate focusing on the language task that is to be carried out by the student (Bruner, 1978; Cazden, 1980). Teachers following this approach must (1) identify the difficulties that particular students will have when approaching a writing task, (2) select appropriate strategies that will help students overcome these difficulties, and (3) structure the task in such a way that these strategies are explicit, thus allowing students to learn the strategies needed when encountering a certain kind of difficulty (Applebee & Langer, 1983). Teachers following such an approach do not segregate the many skills involved in the writing process, but teach each as it is needed for a particular task.

Principles for Teaching Writing to Disadvantaged Students—Although relatively little work has been done that specifically addresses writing instruction for disadvantaged students, several principles can be inferred from the preceding discussion that have particular relevance for disadvantaged students (as well as for the student population in general):

- *Because many come to school without much experience with extended text, disadvantaged students need more opportunities to write, from the earliest time in their school careers.* Applebee et al. (1986) reported that disadvantaged urban students showed lower writing skills. For these students especially, opportunities to write can play a crucial role in developing their writing skills.
- *Curriculum and instruction for this population should deemphasize instruction in the component skills as a prerequisite for meaningful writing.* Research consistently showed that component skill instruction does not facilitate writing skills (Hillocks, 1986). However, this type of instruction persists, and textbooks are written following the approach. The instructional approach discussed above would integrate the use of component skills with the purposeful use of language. Because this approach requires the teacher to address the specific needs of the student, less emphasis can be given to textbooks that present a fixed instructional plan and more emphasis placed on training teachers in this approach (Bruner, 1978; Cazden, 1980).
- *Writing should be learned in contexts that emphasize the meaningful use of language.* This does not necessarily mean a wholesale adoption of curricula built on whole-language philosophies, but it does mean creating opportunities for using written language to communicate things of value to the students. Some movement has been made in this direction (Applebee et al., 1986); however, more thought needs to be given to specific ways that will benefit the student. Work on the writing needs of the Hispanic student, for example, maintains that the student can use writing as a tool for cultural and personal identity. The students must feel that the language they use will be honored. Writing topics that allow students to express opinions, moods, aspirations, and descriptions of self can be effective (although some cultures and settings make it more difficult for students to expose their inner thoughts). Thus, the role of the teacher is to help students discover that they can write and feel the power that the written word gives.
- *Writing teachers need to acknowledge and connect with the students' cultural and linguistic backgrounds,* so that the students' learning needs are not misinterpreted and so that meaningful contexts for learning to write can be better constructed. For example, the writing of students speaking Black English will be influenced by the dialect they speak. Teachers need to become aware that Vernacular Black English is a rule-governed language system that is different but not deficient by comparison with Standard English (Farr Whiteman, 1980). Rather than treating the deviations from Standard English as simply errors in grammar, the teacher can consider such writing as part of the student's primary language system and conduct instruction accordingly.

Summary: Principles Underlying Effective Literacy Curriculum and Instruction for Disadvantaged Students

Several themes run through the literature on literacy curriculum and instruction, although there are differences in the focus and extent of research on reading and writing. We group these themes under the following headings: (1) the shortcomings and prevalence of curricula that emphasize discrete, component skills; (2) movement toward an emphasis on meaning in literacy instruction; (3) the integration of curricular elements and instructional services in the teaching of literacy; (4) accommodating differences of linguistic background in literacy instruction.

The Shortcomings and Prevalence of Curricula That Emphasize Discrete Component Skills

There is a tendency for literacy curricula available to most disadvantaged students to teach discrete, component skills in a linear sequence from what are viewed as the "basics" to more complex skills. Remedial and compensatory programs are especially prone to this tendency, the assumption being that low achievers have to get their basics first, before they can move on to more challenging (and interesting) tasks. But core program instruction in classrooms serving large concentrations of disadvantaged students shows a similar tendency. The generally low levels of literacy for this student population suggest that the current emphasis is not working well, though it may be teaching some discrete skills effectively.

- This means in reading that disadvantaged students are heavily exposed to decoding, with relatively little chance to acquire skills in comprehension.
- In writing, it means that these students typically get a heavy dose of the mechanisms of "language arts"—spelling, grammar, punctuation, penmanship, etc.—and relatively little chance to learn to compose written text.
- Research suggests that basic and higher-order skills can be taught to this student population simultaneously, in ways that engage students more effectively—for example, reading instruction that focuses on comprehension strategies as well as skills or writing instruction that focuses on the process and purposes of writing, as well as its mechanisms.
- At the least, an instructional diet that includes many more opportunities for extended reading and text writing from the earliest stages can improve considerably on the current imbalance in literacy curricula available to this population.

Movement Toward and Emphasis on Meaning in Literacy Instruction

Curricula and instruction that promote the meaningful use of language have much to offer disadvantaged students of all ability levels.

- In reading, comprehension-focused curricula and instruction show particular promise for teaching students to read and understand what they read. This approach implies explicit teaching of comprehension strategies, and an approach to teaching decoding in the context of the application of these skills.
- Chances to write text that communicates things of importance to students in various genres lead students more quickly to a facility with the written word. This implies instruction that creates a variety of opportunities for written expression, and provides the appropriate substantive support for students to be able to accomplish these writing tasks.
- Integrated language approaches (e.g., predicated on "whole-language" philosophies), which combine reading, writing, and oral expression, place a particular emphasis on the meaningful use of language and may have particular benefits for disadvantaged student populations. However, they require a great deal of teachers and may sacrifice some skillbuilding if not done well. The potential of these approaches is not well demonstrated yet in the full range of schools serving disadvantaged students.

The Integration of Curricular Elements and Instructional Services in the Teaching of Literacy

Both the design and implementation of literacy curricula for disadvantaged students exhibit a great deal of "planned fragmentation" due to (1) the discrete-skills emphasis discussed above, (2) the separation and compartmentalization of reading and writing curricula from each other and from other subjects, (3) poor articulation across grades, and (4) frequent lack of connection between regular instruction and the supplementary services that remediate poor achievement in literacy for large numbers of disadvantaged students.

- Curricula and instruction are preferable that connect (1) the different skills with one another (decoding with reading, punctuation with the expression of written thoughts, etc.), (2) the learning of literacy skills with the various subject areas in which these skills can be used, and (3) the learning of reading with writing.
- Coordination of regular and supplementary literacy instruction, where appropriate, can simplify the learning task for low achieving children and enhance the chance of their developing good literacy skills.

Accommodating Differences in Sociolinguistic Background in Literacy Instruction

The sociolinguistic differences between many disadvantaged students and the teachers or curricula they encounter in school are a major stumbling block confronting literacy education for this student population. Effective literacy instruction appears to acknowledge these differences and communicate to students an understanding and respect.

- Literacy instruction thus must be designed to recognize the language strengths students bring, at the same time that it seeks to teach them what for most is a significantly different language from the one they know at home, whether it is an English dialect or a non-English language.

- In reading, effective instruction (1) avoids persistent correction of dialect-based "errors" and repetitive teaching of decoding skills when dialect differences are the source of a student's apparent error; (2) includes a sufficient amount of reading material (including student-generated material) that relates to the base of experience students bring to school.
- In writing, effective instruction (1) recognizes the rules that govern students' speech and language use, then (2) seeks to teach alternate rules for Standard English, rather than treating students' natural language as "errors," and (3) encourages writing that allows students to express and reflect on their experience (while not limiting them to their experiences).

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Notes

1. Some integrated language approaches, however, structure the learning process considerably—see Clay (1987).

2. Supplementary materials purchased through federal or state categorical programs may be in abundance, but these are typically kits, games, exercise books, tapes, etc., designed for discrete skills practice rather than for extended text reading.

3. The statement does not hold for traditional "language arts" materials, of which there are a great many and which are heavily used in the classroom. ◀

Review of Research on Effective Curriculum and Instruction in Mathematics

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The research literature on the teaching of mathematics to disadvantaged or other students is more limited than that related to literacy. For various reasons, which are not the concern of this review, the scholarly community has devoted itself primarily to research on mathematical learning, along with a range of investigations examining particular classroom practices. Practically nothing has been done to examine content (Romberg and Carpenter, 1986), and relatively little has been done to zero in on the particular needs, circumstances, or proper instruction of disadvantaged students.

Similarly, investigations that are comprehensive, longitudinal, and naturalistic are relatively sparse—little has been done, for example, to describe teaching practices for a whole year (Porter, Floden, Freeman, Schmidt, and Schwille, 1988). More than a decade ago, a leading mathematics educator wrote that research in this field must begin "with careful descriptions of a specified set of teachers teaching a specified set of topics to a specified set of pupils" (Kilpatrick, cited in Romberg and Carpenter, 1986). To date, it seems that this goal has not been reached. The frequency of such statements about the need for additional mathematics education research is, itself, an important finding of this review.

The consequence of these gaps in the literature is that we must often extrapolate from what is known to develop a picture of what is appropriate for disadvantaged students. In many respects, our research will be breaking new ground.

In this section, we review research relevant to curriculum and instruction in mathematics for disadvantaged students. As with reading and writing instruction, we focus on what is (and should be) taught and how. Our discussion follows the organization of our review of literacy research, commencing with a review of overarching issues, then an examination of the typical pattern of mathematics curriculum and instruction in grades 1–8, followed by what is known about curriculum and instruction aimed at disadvantaged students. We conclude the section by reviewing what is known about effective practices.

Overarching Issues

Some of the issues noted in discussing literacy curriculum and instruction (See Knapp and Needels, pp. 206–233 in this book) apply to mathematics as well. But certain issues can be restated and others added that capture the focus of scholarly discussions in this subject area. We highlight the following.

Relative Emphasis on "Basic" Versus "Higher-Order" Skill Components in the Mathematics Curriculum for Disadvantaged Students—As in the case of literacy instruction, the question of whether to concentrate on "basic" computational skills or a broader mathematics curriculum is difficult to answer for educators who face children appearing to have little exposure to formal mathematics. A natural response to this situation is to emphasize highly structured curricula that feature repetitive drill-and-practice in computational algorithms, but that leave little or no room for other aspects of mathematics—for example, that require and stimulate analytical or problem-solving skills—which are widely agreed to be important.

Focusing on Curriculum for the Disadvantaged Versus Curriculum for All—The primary locus of the problem in mathematics education for disadvantaged students may differ from the situation in literacy education. By broad agreement, the principal problem in mathematics education is the inefficient and narrow curriculum provided to the great majority of students. The National Assessment of Educational Progress (NAEP), international comparisons, and other sources indicate that American students as a whole are doing poorly in mathematics; disadvantaged students are worst off, but other students are not so far ahead of them. It would be a grave error to take the norm in American classrooms as some kind of ideal for disadvantaged students (Secada, 1988).

An implied hypothesis is that disadvantaged students presented with a mathematics curriculum *well* designed for typical students will achieve at significantly higher levels (the same could be said of many subject areas, undoubtedly). A direct analogy can be found in science, where the Science Curriculum Improvement Study (SCIS) curriculum, designed for "average" elementary school students, was later found to be especially effective for disadvantaged students (Knapp, St. John, Zucker, Needels, and Stearns, 1987). Similarly, recent NSF-supported research on mathematics instruction began with typical learners, but has shown some outstanding results in classrooms with large numbers of disadvantaged students (Peterson, 1988a; and personal communication).

Addressing Differential Conditions for Mathematics Learning—But improvements in the curriculum for all students will not obviate entirely the need to address the adverse conditions for mathematics learning that differentially affect disadvantaged students. Many of the worst features of American mathematics education (e.g., an overemphasis on arithmetic computation through grade 8) are intensified for disadvantaged students. In effect, disadvantaged students show the most severe ill effects of a system of mathematics education that is badly flawed for all students. In this view, a central issue is understanding the differential impact on disadvantaged students of the systemic problems/conditions that affect American mathematics education as a whole, such as poor textbooks, low expectations, insufficient homework, or inappropriate goals.

The basic assumptions and structure of the current mathematics curriculum appear to intensify certain students' disadvantagement as they get older. It is well established that the mathematics achievement of racial and ethnic subpopulations (excluding Asian-Americans) shows increasing divergence from the national average with increases in the age of the population tested (Dossey, Mullis, Lindquist, and Chambers, 1988), and this pattern would seem to generalize to the disadvantaged population as a whole. Disadvantage seems to grow worse as students get older. School-based practices appear to contribute to this lower growth trajectory. Whether school-based practices can equalize growth trajectories remains an unanswered question, but many would agree that schools can, and should, narrow the gap.

The problem of what instructional strategies should be applied to prevent students' disadvantage from increasing over time includes many subissues, such as the efficacy and effects of tracking; the balance of depth versus breadth of topical coverage in the curriculum; the extent and kind of access to instructional technologies; and the expectations for achievement that should be established for these students in the first place.

Maximizing the Transfer of Mathematical Skills Learned in Schools to Other Applications—There is fairly clear evidence that the mathematics children *do* learn in school does not necessarily transfer well to other situations (Resnick, 1987b). The transfer of skills from school to real-world applications is especially lacking for disadvantaged students; the value of these students' "native" mathematical thinking may not be used sufficiently well as a building block.

It is not clear exactly how to maximize transfer, but at least two possibilities present themselves. First, curriculum and instruction can embed the learning of mathematical skills in a context in which these skills can be applied, either in simulated situations or in solving actual problems. Second, curriculum and instruction may make greater efforts to recognize and draw on the mathematical knowledge children bring to school. Research has clearly demonstrated that, independent of school, disadvantaged children can develop effective mathematical strategies and thinking to cope with the world in which they live. For example, studies of disadvantaged youngsters in Brazil who must use mathematics extensively for work-related activities such as selling candy show that these children use strategies different from those taught in school, with greater accuracy than when they apply strategies learned in school (Carraher, Carraher, and Dias-Schliemann, 1985; Saxe, 1988). Schools probably take insufficient notice of these kinds of everyday mathematical skills.

Good curriculum and instruction for disadvantaged students can no longer (if it ever could) ignore conceptual understanding or applications in favor of rote skills, which have limited transferability. Effective mathematics instruction for this population thus mixes concepts, skills, and applications; whether it should do so in exactly the same way as for more advantaged students, however, remains an open question.

The Content of Remedial or Compensatory Mathematics Instruction—What to teach in specialized mathematics programs serving low-achieving students is also at issue. To the extent these programs concentrate on further practice with the computational skills that students appear to lack, they may only compound the problem, by failing to provide students with a basis for understanding what they are doing or visualizing how it might apply to their lives. On the other hand, given the small amounts of time typically available to students who participate in these programs (e.g., three or four 20-minute sessions a week), it may be difficult to do much more. Ultimately, the combination of regular classroom instruction and remedial services is responsible for conveying mathematics to low-achieving students. Achieving the right relationship and division of labor between these two is a major question for instructing the large numbers of disadvantaged students who appear to have limited proficiency in this area of the school curriculum.

Mathematics Curriculum and Instruction in Typical Elementary and Junior High Schools

In mathematics education, what happens in classrooms—the "enacted curriculum"—tends to follow closely what is intended for these classes. By general agreement, both intended and enacted curricula are too limited.

The Intended Curriculum—A first step in understanding typical practices in grades 1–8 is to examine the intended curriculum as revealed by texts, frameworks or syllabi, and tests. A simple but very important study of K–8 mathematics textbooks helps to understand the curriculum as laid out by publishers (Flanders, 1987). This study analyzed popular textbook series page by page to determine what content in each is new and what is practice of material already taught. The principal finding was as follows:

> ...a relatively steady decrease occurs in the amount of new content over the years up through eighth grade, where less than one-third of the material is new to students. This decrease is followed by an astounding rise in the amount of new content in the texts of the most common ninth-grade course, algebra. (Flanders, 1987)

Overall, the intended curriculum in mathematics is repetitive, unchallenging, and (for many) boring. Cross-national comparative research on mathematics confirms that the U.S. curriculum at the eighth-grade level (for all tracks) is substantially less challenging than in most other nations, and especially so for students at the "low" end (McKnight et al., 1987).

A few states have tried to adopt significantly different approaches. Connecticut, for example, has plans to make calculators available to every student in the eighth grade. California adopted a new state framework, rejected all elementary mathematics texts, and made publishers revise books before the state would adopt them (Knapp et al., 1987). This approach, however, is not typical of most states.

Some major tests used at the K–8 level have been focused more carefully in recent years on higher-order thinking skills, e.g., NAEP tests and some state proficiency tests. As far as we are aware, most testing in mathematics at this level—especially teacher-made tests—is focused on arithmetic computation and other lower-order skills. The common, day-to-day tests that teachers use with their students may be especially poor in this respect.

In summary, despite abundant rhetoric about teaching problem-solving and other higher-order skills, an examination of the intended curriculum in grades 1–8 mathematics shows that a focus on arithmetic computation is the dominant norm.

The Enacted Curriculum—Investigations of the enacted curriculum paint a complementary picture. Studies have shown that in grades 1–8 by far the majority of time in mathematics is spent focusing on arithmetic computation and lower-level skills (Peterson, 1988b; McKnight et al., 1987; Dossey et al., 1988). Yet the transfer of lower-level skills to problem solving and higher-order thinking is not very good, suggesting a mismatch of goals and strategies. In addition, problem solving is not a major focus of the curriculum. Yet increasing numbers of researchers believe that students don't just "pick up" problem-solving strategies, rather they must be explicitly taught, and to a much greater degree than is currently the case (Resnick, 1987a and b; Peterson, 1988a). Generally speaking, most grade 1–8 mathematics instruction is not focused on higher-order thinking; for example, the introduction of even simple word problems may be postponed until children have reached a high level of mastery of computational skills. To exaggerate the situation somewhat, a comparable situation might be not allowing children to engage in real conversations until they have mastered sufficient numbers of grammar exercises.

NAEP data confirm this bleak view. According to the most recent national assessment in mathematics:

- Mathematics classrooms are "more concerned with students' rote use of procedures than with their understanding of concepts and development of higher-order thinking skills" (Dossey et al., 1988). While NAEP shows performance gains since 1978, these are primarily for lower-order skills.
- The typical range of instructional techniques used in mathematics

classes is limited. For example, use of small group activity, laboratory work, or special projects is rare (Dossey et al., 1988).

Recent comparative research has demonstrated striking differences between the way mathematics and other subjects are taught in school. In one study, researchers found that about half the time students are learning mathematics they are engaged in solitary seatwork, while the comparable figure for social studies is only one-third (Stodolsky, 1985). The key contrasts researchers discovered between fifth-grade mathematics and social studies teaching are summarized this way:

> In math, one way of teaching and learning dominated: students watched a teacher demonstrate a procedure—such as how to multiply fractions—then practiced it alone at their desks.... Except for rulers in a few classrooms, students used only pencils, paper, and textbooks.... Although taught by the same teachers, social studies lessons varied much more—from day to day within classrooms and from one classroom to the next. Group work complemented whole class instruction, and children spent less time laboring alone at their desks. The curriculum explicitly stressed independent learning and the development of research skills, so students consulted maps, encyclopedias, and newspapers, as well as textbooks. (Featherstone, 1986)

Others confirm that mathematics seems to be characterized by especially heavy reliance on textbooks and teacher presentations, and by very limited access to manipulatives, social support, or small-group work (Dossey et al., 1988). As one researcher summarized the pattern: "Essentially, students have one route to learning [mathematics]: teacher explanation and self-paced practice" (Stodolsky, 1985).

International comparisons provide further perspective on the typical pattern just described. In the early grades, one study found that relatively difficult addition and subtraction problems are introduced very late in American textbooks compared to when those topics are introduced in Soviet, Taiwanese, Mainland Chinese, and Japanese texts (Stigler and Perry, 1988). At the eighth-grade level, the United States, unlike most other nations involved in the Second International Mathematics Study (SIMS), is still emphasizing instruction in arithmetic; nonetheless, the achievement of American students in arithmetic is still below the average for all participating countries (McKnight et al., 1987). The SIMS also found that:

- U.S. mathematics instruction (at the eighth-grade level) seems to be more tied to the textbook than instruction in most other countries.
- Given a choice between more abstract and more perceptual approaches to teaching a topic (such as fractions), American teachers more often chose the abstract representations; this might pose particular difficulties for disadvantaged students.

- Americans' expectations of what students can learn in mathematics are relatively low. American parents, more than Chinese and Japanese parents, for example, seem to believe that ability in mathematics is "inborn," and therefore that hard work is less important (Stigler and Perry, 1988).

An intriguing finding from international studies concerns the continuity of instruction and ease of understanding mathematics. One study investigated changes in instructional "segments"—that is, the smallest unit of instruction or a sequence of activity on a single topic. Segments in mathematics were defined as changing if there was a change in topic, materials, or type of activity. In Japan, only 6.9 percent of segment changes are marked by changing topic; in Taiwan, 16.1 percent; and in the United States, 24.8 percent (Stigler and Perry, 1988). (This parallels a finding by Porter et al. [1988] that 70 percent to 80 percent of the topics taught during a school year receive 30 minutes or less of instructional time.) The researchers suggest that "it appeared to us that the Chinese and Japanese classes were in some sense more comprehensible than were the U.S. classes" (Stigler and Perry, 1988). Students' comprehension of individual lessons has not been measured directly, but if Stigler and Perry's hypothesis is correct, it would help to explain why American students' achievement is lower than we would wish.

Given these patterns of enacted curriculum, it is not surprising that many research findings show that students become "turned off" to mathematics in large numbers. In the higher grades (junior high school and above), most students apparently hold negative views on the nature of the discipline, and have limited expectations for the relevance of mathematics to their own futures (Dossey et al., 1988). This view represents a significant change from earlier grades when mathematics is among the subjects most liked by students (though, perhaps, they like mathematics at this level because it presents them with easy lower-level tasks). There also seems to be a significant gap in the minds of students between mathematics as it is taught (e.g., as a mechanical set of procedures) and mathematics as it is applied (e.g., as a way of thinking about problems in new situations). Various features with high motivational appeal are not yet common practice, such as microcomputers and "real-world" applications. Improvements recommended by many influential groups include appropriate—and appealing—technology (notably calculators and computers) and increased use of cooperative learning approaches (National Council of Teachers of Mathematics, 1987; Knapp et al., 1987).

Taken together, these and many other research findings have motivated a wave of efforts to change American mathematics instruction. Although experts still disagree on the precise prescription that can be formulated on the basis of research, the field is not content to wait until "all the answers are in." The National Council of Teachers of Mathematics has recently adopted, for the first time, a comprehensive set of *Curriculum and Evaluation Standards for School Mathematics*, which includes many recommendations for departure from prevailing practices (National Council of Teachers of Mathematics, 1987).

The following summarizes widely held views on the state of research on mathematics instruction and the overall direction of change:

> ...current research is beginning to establish sufficient findings so that significant changes are called for in the teaching of mathematics. The traditional classroom focuses on competition, management, and group aptitudes; the mathematics taught is assumed to be a fixed body of knowledge, and it is taught under the assumption that learners absorb what has been covered. The research shows that learning proceeds through *construction*, not *absorption*, and that good teaching involves more than management. We believe that the task of this next decade will be to bring the variety of constructs from [research on] both [cognitive science and classroom teaching] together and relate them to an appropriate view of the mathematics to be taught. (Romberg and Carpenter, 1986)

Curriculum and Instruction for Disadvantaged Students

Some scholars have examined the particular situation of disadvantaged students more directly. As we alluded to earlier, the available evidence suggests that the deficiencies of current curriculum and instruction in mathematics apply to them, only in greater degree.

Schools enrolling low-SES students emphasize more computation and less instruction focusing on applications and concepts than other schools. As a group, therefore, these students spend far more time learning facts and computational skills, and cover fewer topics in mathematics (Porter et al., 1988).

This state of affairs partly reflects the assumption on which many traditional mathematics curricula are based, that computational skills must be learned before children are taught to solve even simple word problems. A growing body of research, however, indicates that this is a misguided assumption, and that "higher-order" skills should be embedded at all levels of instruction from novice through expert (Peterson, 1988b; Romberg and Carpenter, 1986).

Thus, under current assumptions, for those disadvantaged students slow to learn "basic skills," the curriculum may remain relatively impoverished for many years, contributing to a vicious cycle of reduced interest, expectations, and achievement. Although the curriculum is by no means the only culprit in this situation, recent evidence suggests that it is a prime target for change (McKnight et al., 1987; Flanders, 1987). As we have already stated, this problem exists across the board in U.S. mathematics education and, while exaggerated for disadvantaged students, is a problem for all.

Schools serving disadvantaged students tend to have less capable teachers and inadequate resources for mathematics education. Disadvantaged students are typically exposed to the least-trained teachers

(Darling-Hammond and Green, 1988). Schools enrolling lower-SES students have fewer resources available for mathematics instruction, and in some of those schools conditions and morale are at pitifully low levels (Porter et al., 1988; Corcoran, Walker, and White, 1988).

Schools tend to have low expectations of disadvantaged students' ability to learn mathematics. A growing body of opinion and research suggests that the expectations set for students are important determinants of achievement and that expectations may be harming disadvantaged students in several ways. For example, some researchers, on the basis of many studies, suggest that we know "perhaps one third of teachers behave in ways that sustain the poor performance of low achievers" (Good and Biddle, 1988). These authors also assert that research shows that low expectations generally are projected to entire classes, i.e., that low expectations are associated with particular teachers' views of whole groups—a factor that can be especially detrimental in schools serving high concentrations of disadvantaged students. Similarly, some researchers have suggested that tracking in effect becomes a self-fulfilling expectation imposed on students, resulting in little movement from lower to upper tracks (Oakes, 1985).

Disadvantaged students' families, and their communities, are typically less able to provide concrete assistance to students for mathematics learning. This is presumably one premise on which such successful programs as "Family Math" are designed. The very assumptions about what constitutes "mathematics" (e.g., that it is merely arithmetic) and its role in society are likely to be different among varying communities, and such assumptions, if overly narrow, can create significant problems for students. Parental encouragement and support provide another source of information to students, closely related to expectations. The High School and Beyond Study data show that such parental support is more important than SES as a predictor of achievement, especially for blacks (Committee on Research in Math, Science, and Technology, 1985).

There is disagreement about the nature and effects of compensatory mathematics programs for the disadvantaged; at best, these programs appear to improve basic skills proficiency but do not narrow the overall achievement gap. At one extreme, some scholars assert that little is accomplished by such programs:

> ...most programs probably widen the gap of knowledge about mathematics between those who are affluent in our society and those who are not.... There is nothing in the [compensatory] programs I have reviewed that would give low-income students an opportunity to do any important mathematics. (Romberg, 1988)

The recent National Assessment of Chapter 1, on the other hand, led to different conclusions. Basic skills instruction in mathematics is, of course, one of the major services provided by Chapter 1, and the study presents evidence that, at least to some degree, these services are effective. The Chapter 1 study reported that:

> Students receiving Chapter 1 services experience larger increases in their standardized achievement test scores than comparable students who do not. However, their gains do not move them substantially toward the achievement levels of more advantaged students. (Kennedy, Birman, and Demaline, 1986)

The same volume also reported that "students participating in Chapter 1 mathematics programs gain more than those participating in Chapter 1 reading programs." The fact that black and Hispanic students' scores have risen significantly on NAEP tests during the past decade may be partially attributable to the influence of these programs.

Summary: Principles Underlying Effective Curriculum and Instruction in Mathematics for Disadvantaged Students

Even though relatively few studies have examined mathematics programs aimed specifically at disadvantaged students, the research and commentary we have reviewed points to several themes regarding effective curriculum and instruction in mathematics for this student population. Three themes capture the most important implications for disadvantaged students and serve to organize the principles supported by the literature:

1. Ineffective curricula available to all students are the most important factor inhibiting mathematics learning of disadvantaged students.

2. Effective mathematics curricula in grades 1–8 include a broader range of topics than is currently taught and emphasize conceptual understanding and the application of mathematics skills.

3. Improved curricula require more than direct instruction models have to offer, although these models can enhance some aspects of students' mathematical learning.

Focus on the Mathematics Curriculum for All Students—It appears that the largest improvement in curriculum and instruction for disadvantaged students in mathematics will come from a basic change in the structure of mathematics curricula available to all students. We have already commented on the limitations and remarkable uniformity of mathematics curricula to which most first through eighth graders are currently exposed; its deficiencies need not be repeated here.

The key point for schools serving disadvantaged students is that no amount of incremental adjustment to overcome the relatively impoverished state of such schools will make much difference in the mathematics abilities these students take away from school. To be sure, with better teachers and more resources, these students will add and subtract with more confidence and greater accuracy, at least in situations that present them with arithmetic operations in the format they have learned in school. But their ability to comprehend what they are doing and to apply it to the solution of novel problems will remain distinctly limited. Neither these students nor their more affluent counterparts will be adequately prepared for the mathematical challenges they will encounter in the future (see paper by Secada in *Better Schooling for the Children of Poverty*, published by the U.S. Department of Education, 1990).

This is not to say that the conditions that distinguish schools in affluent and less affluent communities are unimportant in mathematics education. As in the case of reading, schools serving large numbers of disadvantaged students tend to teach an even more restricted form of mathematics, and there is clearly a need to address the conditions that make this the case (professional background, family understanding and support, resources for learning, etc.). But remedying all these factors will make only a marginal difference in students' exposure to important mathematical ideas and development of sophisticated mathematical skills.

Emphasis on Conceptual Understanding and Skills Application— The broad contours of an improved mathematics curriculum for disadvantaged (and other) students in grades 1 through 8 are fairly clear, although educators have yet to realize them in specific, workable programs on a wide scale. The following principles are especially important:

- *The curricula place emphasis on students developing a conceptual understanding of the mathematics they are learning*. That means, for instance, that before, during, and after the learning of multiplication tables, students are helped to see that multiplication is an extension of addition, multiplication is commutative, etc. This understanding develops as students approach the topic of multiplication in a variety of ways, including the use of manipulatable objects and exposure to manual systems of multiplication, among other techniques.
- *The curriculum is designed so that mathematical skills are learned and practiced, wherever possible, in situations that allow students to apply the skills to actual situations and problems*. Using mathematical ideas and operations to accomplish something appears to enhance mathematics learning in a variety of ways: (1) motivation is increased; (2) students are helped to see how skills transfer to a variety of situations; and (3) understanding of mathematical concepts is increased, as students appreciate the utility and range of application of mathematical ideas and operations. Applications are especially important for disadvantaged students, for whom what is learned in school often seems remote from the world they experience outside of school.
- *From the earliest grades, the mathematics curriculum includes a range of topics often reserved for later years or even ignored by current curricula*. Of particular importance in grades 1–8 are a series of topics that many current curricula only touch on, if that: problem solving (which is implied by an emphasis on applications), estimation and measurement, geometry, and probability and statistics are the four topics most often mentioned in this regard.

There are other desirable ingredients in the curriculum that should be mentioned, chief among them the incorporation of the calculator and the computer into mathematics instruction. This is beginning to happen in certain states and localities, but the net improvement in schools serving disadvantaged students appears to be relatively small to date; all indications suggest that when these technologies do appear in such settings, they are typically used to reinforce the current limited curricula, as evidenced by the use of drill-and-practice software in mathematics instruction (for example, see Ragosta et al., 1981, regarding the use of computers to boost computation skills of inner-city children).

Expanding the Teacher's Pedagogical Repertoire—As a result of a great deal of research on teacher behavior, much of it research investigating aspects of "direct" and "active" instruction in various subject areas, certain basic principles of instruction in mathematics seem to be well established.[1] Time-on-task, or engaged learning time, should be maximized, with little time devoted to nonacademic pursuits. Work should be structured so that students experience frequent success and receive feedback about their work relatively quickly. A businesslike but supportive environment is called for in classrooms, and in the school as a whole.

Some research has focused explicitly on instructional practices that are successful with disadvantaged students. For example, one review article reported that:

> ...data indicate that it was especially essential for teachers in low-SES classes to regularly monitor activity, supervise seatwork, and initiate interactions with students who needed help or supervision. Teachers in high-SES classes did not have to be quite so vigilant or initiatory, and could mostly confine themselves to responding to students who indicated a need for help. Positive affect, a relaxed learning climate, and praise of student responses were also more related to achievement in low-SES settings. (Brophy and Good, 1986)

As in the case of reading, the research referred to in the quote indicates that active, teacher-directed instruction can be effective in teaching mathematics to this population of students. Studies have documented relationships between the features of instruction implied by these models—continuous control of learning by the teacher, the emphasis on whole-class instruction, the repeated cycle of demonstration-practice-feedback, and regular assessment—and student achievement in mathematics (e.g., Good, Grouws, and Ebmeier, 1983). Because this approach to instruction emphasizes the teacher's active role, it contrasts favorably with common practices in mathematics teaching, which rely too heavily on individual seatwork.

But, as in other subject areas, there are clear drawbacks to the original direct instruction model teaching approaches for conveying much of the mathematical content that appears important. Especially when teachers instruct their classes in a "direct" instruction mode, their pedagogy tends to limit the teaching of higher-order thinking skills and lends itself to highly proceduralized forms of mathematics teaching: so many minutes for review, so many minutes for development of new concepts, and so on. As such, these models are likely to encourage a correspondingly proceduralized view of mathematics as a set of procedures for manipulating numbers or mathematical problems.

Research suggests that the following ways of expanding teachers' pedagogical repertoire are especially important to consider in the case of instruction for disadvantaged students, in particular:

- *Instruction that promotes self-monitoring and study skills.* Though much of it requires active instruction by teachers at the outset, explicitly teaching students to monitor their own work coupled with the chance to use these skills can significantly build the students' ability to learn independently.
- *Teacher-student and student-student discourse about mathematical ideas and applications.* Increasing evidence links the development of the ability to think mathematically with the presence of sustained conversation between students and teachers, and among students, about the content of mathematical activities (e.g., Fennema, Carpenter, Keith, and Jenkins, 1989; Russell and Friel, 1989). Although this work has not been extensively applied to disadvantaged populations, there is reason to believe that it makes sense there, too.
- *Multiple representations of mathematical ideas.* With thoughtful use of manipulatives, graphic displays, and other ways of representing mathematical ideas, teachers can help students grasp the concepts behind symbols and operations, though the materials alone will not teach the connections between object and idea; teachers must do that (Schram, Feiman-Nemser, and Ball, 1989).
- *Instruction that provides experience with educational technologies as problem-solving tools.* When teachers integrate technologies such as computers and calculators into their instruction, students acquire powerful problem-solving tools, not to mention the motivational influence of these tools. This means that teachers must engineer the use of technology in ways that go beyond the widespread practice of emphasizing drill-and-practice software for disadvantaged learners.
- *Project-centered teaching* that encourages the use of structured student task groups and peer academic leadership (McKnight, 1988).

However, unequivocal research findings confirming effective instructional practices are relatively sparse, and many "commonsense" beliefs are not easily confirmed by research. For example, researchers have not definitely associated extensive knowledge of mathematics as a discipline (for example, the content knowledge possessed by individuals who hold a master's degree in mathematics) with higher student achievement, even though in the extreme cases, lack of subject matter knowledge clearly reduces what a teacher can do. Another example is provided by the increasingly large body of research showing that instruction does not take full advantage of the initial knowledge of mathematics with which students come to school. Some have gone so far as to state that "children's invented strategies for solving addition and subtraction problems are frequently more efficient and more conceptually based than the mechanical procedures included in many mathematics programs" (Romberg and Carpenter, 1986). While debate continues on the frequency with which student-developed problem-solving strategies work—and the practicality of instruction that promotes this—the possibility of expanding the instructional repertoire in mathematics seems especially important to pursue.

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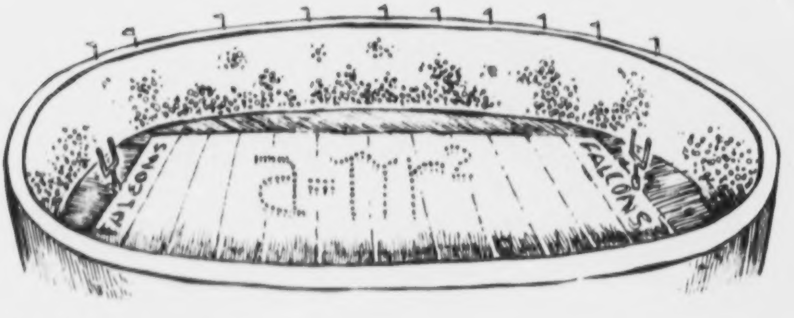
Notes

1. We do not treat "direct" and "active" instruction as the same, though they share the characteristic that teachers actively control most of the learning activities most of the time. The former are more limited than the latter and follow some variation of the original Follow Through Direct Instruction model. ◀



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Students Need Challenge, Not Easy Success

by Margaret M. Clifford

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■ *Only by teaching students to tolerate failure for the sake of true success can educators control the national epidemic of "educational suicide."*

Hundreds of thousands of apathetic students abandon their schools each year to begin lives of unemployment, poverty, crime, and psychological distress. According to Hahn (1987), "Dropout rates ranging from 40 to 60 percent in Boston, Chicago, Los Angeles, Detroit, and other major cities point to a situation of crisis proportions." The term *dropout* may not be adequate to convey the disastrous consequences of the abandonment of school by children and adolescents; *educational suicide* may be a far more appropriate label.

School abandonment is not confined to a small percentage of minority students, or low ability children, or mentally lazy kids. It is a systemic failure affecting the most gifted and knowledgeable as well as the disadvantaged, and it is threatening the social, economic, intellectual, industrial, cultural, moral, and psychological well-being of our country. Equally disturbing are students who sever themselves from the flow of knowledge while they occupy desks, like mummies.

Student apathy, indifference, and underachievement are typical precursors of school abandonment. But what causes these symptoms? Is there a remedy? What will it take to stop the waste of our intellectual and creative resources?

To address these questions, we must acknowledge that educational suicide is primarily a motivational problem—not a physical, intellectual, financial, technological, cultural, or staffing problem. Thus, we must turn to motivational theories and research as a foundation for examining this problem and for identifying solutions.

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Curiously enough, modern theoretical principles of motivation do not support certain widespread practices in education. I will discuss four such discrepancies and offer suggestions for resolving them.

Moderate Success Probability Is Essential to Motivation

The maxim, "Nothing succeeds like success," has driven educational practice for several decades. Absolute success for students has become the means *and* the end of education: It has been given higher priority than learning, and it has obstructed learning.

A major principle of current motivation theory is that tasks associated with a moderate probability of success (50 percent) provide maximum satisfaction (Atkinson 1964). Moderate probability of success is also an essential ingredient of intrinsic motivation (Lepper and Greene 1978, Csikszentmihalyi 1975, 1978). We attribute the success we experience on easy tasks to task ease; we attribute the success we experience on extremely difficult tasks to luck. Neither type of success does much to enhance self-image. It is only success at moderately difficult or truly challenging tasks that we explain in terms of personal effort, well-chosen strategies, and ability; and these explanations give rise to feelings of pride, competence, determination, satisfaction, persistence, and personal control. Even very young children show a preference for tasks that are just a bit beyond their ability (Danner and Lonky 1981).

Consistent with these motivational findings, learning theorists have repeatedly demonstrated that moderately difficult tasks are a prerequisite for maximizing intellectual development (Fischer 1980). But despite the fact that moderate challenge (implying considerable error-making) is essential for maximizing learning and optimizing motivation, many educators attempt to create error-proof learning environments. They set minimum criteria and standards in hopes of ensuring success for all students. They often reduce task difficulty, overlook errors, de-emphasize failed attempts, ignore faulty performances, display "perfect papers," minimize testing, and reward error-free performance.

It is time for educators to replace easy success with challenge. We must encourage students to reach beyond their intellectual grasp and allow them the privilege of learning from mistakes. There must be a tolerance for error-making in every classroom, and gradual success rather than continual success must become the yardstick by which learning is judged. Such transformations in educational practices will not guarantee the elimination of educational suicide, but they are sure to be one giant step in that direction.

External Constraints Erode Motivation and Performance

Intrinsic motivation and performance deteriorate when external constraints such as surveillance, evaluation by others, deadlines, threats, bribes, and rewards are accentuated. Yes, even rewards are a form of constraint! The reward giver is the General who dictates rules and issues orders; rewards are used to keep the troops in line.

Means-end contingencies, as exemplified in the statement, "If you complete your homework, you may watch TV" (with homework being the means and TV the end), are another form of external constraint. Such contingencies decrease interest in the first task (homework, the means) and increase interest in the second task (TV, the end) (Boggiano and Main 1986).

Externally imposed constraints, including material rewards, decrease task interest, reduce creativity, hinder performance, and encourage passivity on the part of students—even preschoolers (Lepper and Hodell 1989)! Imposed constraints also prompt individuals to use the "minimax strategy"—to exert the minimum amount of effort needed to obtain the maximum amount of reward (Kruglanski et al. 1977). Supportive of these findings are studies showing that autonomous behavior—that which is self-determined, freely chosen, and personally controlled—elicits high task interest, creativity, cognitive flexibility, positive emotion, and persistence (Deci and Ryan 1987).

Unfortunately, constraint and lack of student autonomy are trademarks of most schools. Federal and local governments, as well as teachers, legislate academic requirements; impose guidelines; create rewards systems; mandate behavioral contracts; serve warnings of expulsion; and use rules, threats, and punishments as routine problem-solving strategies. We can legislate school attendance and the conditions for obtaining a diploma, but we cannot legislate the development of intelligence, talent, creativity, and intrinsic motivation—resources this country desperately needs.

It is time for educators to replace coercive, constraint-laden techniques with autonomy-supportive techniques. We must redesign instructional and evaluation materials and procedures so that every assignment, quiz, test, project, and discussion activity not only allows for, but routinely *requires*, carefully calculated decision making on the part of students. Instead of minimum criteria, we must define multiple criteria (levels of minimum, marginal, average, good, superior, and excellent achievement), and we must free students to choose criteria that provide optimum challenge. Constraint gives a person the desire to escape; freedom gives a person the desire to explore, expand, and create.

Prompt, Specific Feedback Enhances Learning

A third psychological principle is that specific and prompt feedback enhances learning, performance, and motivation (Ilgen et al. 1979, Larson 1984). Informational feedback (that which reveals correct responses) increases learning (Ilgen and Moore 1987) and also promotes a feeling of increased competency (Sansone 1986). Feedback that can be used to improve future performance has powerful motivational value.

Sadly, however, the proportion of student assignments or activities that are promptly returned with informational feedback tends to be low. Students typically complete an assignment and then wait one, two, or three days (sometimes weeks) for its return. The feedback they do get often consists of a number or letter grade accompanied by ambiguous comments such as "Is this your best?" or "Keep up the good work." Precisely what is good or what needs improving is seldom communicated.

But, even if we could convince teachers of the value of giving students immediate, specific, informational feedback, our feedback problem would still be far from solved. How can one teacher provide 25 or more students immediate feedback on their tasks? Some educators argue that the solution to the feedback problem lies in having a tutor or teacher aide for every couple of students. Others argue that adequate student feedback will require an increased use of computer technology. However, there are less expensive alternatives. First, answer keys for students should be more plentiful. Resource books containing review and study activities should be available in every subject area, and each should be accompanied by a key that is available to students.

Second, quizzes and other instructional activities, especially those that supplement basic textbooks, should be prepared with "latent image" processing. With latent image paper and pens, a student who marks a response to an item can watch a hidden symbol emerge. The symbol signals either a correct or incorrect response, and in some instances a clue or explanation for the response is revealed. Trivia and puzzle books equipped with this latent image, immediate feedback process are currently being marketed at the price of comic books.

Of course, immediate informational feedback is more difficult to provide for composition work, long-term projects, and field assignments. But this does not justify the absence of immediate feedback on the learning activities and practice exercises that are aimed at teaching concepts, relationships, and basic skills. The mere availability of answer keys and latent image materials would probably elicit an amazing amount of self-regulated learning on the part of many students.

Moderate Risk Taking Is a Tonic for Achievement

A fourth motivational research finding is that moderate risk taking increases performance, persistence, perceived competence, self-knowledge, pride, and satisfaction (Deci and Porac 1978, Harter 1978, Trope 1979). Moderate risk taking implies a well-considered choice of an optimally challenging task, willingness to accept a moderate probability of success, and the anticipation of an outcome. It is this combination of events (which includes moderate success, self-regulated learning, and feedback) that captivates the attention, interest, and energy of card players, athletes, financial investors, lottery players, and even juvenile video arcade addicts.

Risk takers continually and freely face the probability of failing to attain the pleasure of succeeding under specified odds. From every risk-taking endeavor—whether it ends in failure or success—risk takers learn something about their skill and choice of strategy, and what they learn usually prompts them to seek another risk-taking opportunity. Risk taking—especially moderate risk taking—is a mind-engaging activity that simultaneously consumes and generates energy. It is a habit that feeds itself and thus requires an unlimited supply of risk-taking opportunities.

Moderate risk taking is likely to occur under the following conditions.

- The success probability for each alternative is clear and unambiguous.
- Imposed external constraints are minimized.
- Variable payoff (the value of success increases as risk increases) in contrast to fixed payoff is available.
- The benefits of risk taking can be anticipated.

My own recent research on academic risk taking with grade school, high school, and college students generally supports these conclusions. Students do, in fact, freely choose more difficult problems (a) when the number of points offered increases with the difficulty level of problems, (b) when the risk-taking task is presented within a game or practice situation (i.e., imposed constraint or threat is minimized), and (c) when additional opportunities for risk taking are anticipated (relatively high risk taking will occur on a practice exercise when students know they will be able to apply the information learned to an upcoming test). In the absence of these conditions we have seen students choose tasks that are as much as one-and-a-half years below their achievement level (Clifford 1988). Finally, students who take moderately high risks express high task interest even though they experience considerable error making.

In summary, risk-taking opportunities for students should be (a) plentiful, (b) readily available, (c) accompanied by explicit information about success probabilities, (d) accompanied by immediate feedback that communicates competency and error information, (e) associated with payoffs that vary with task difficulty, (f) relatively free from externally imposed evaluation, and (g) presented in relaxing and nonthreatening environments.

In today's educational world, however, there are few opportunities for students to engage in academic risk taking and no incentives to do so. Choices are seldom provided within tests or assignments, and rarely are variable payoffs made available. Once again, motivational theory, which identifies risk taking as a powerful source of knowledge, motivation, and skill development, conflicts with educational practice, which seeks to minimize academic risk at all costs.

We must restructure materials and procedures to encourage moderate academic risk taking on the part of students. I predict that if we fill our classrooms with optional academic risk-taking materials and opportunities so that all students have access to moderate risks, we will not only lower our educational suicide rate, but we will raise our level of academic achievement. If we give students the license to take risks and make errors, they will likely experience genuine success and the satisfaction that accompanies it.

Using Risk Can Ensure Success

Both theory and research evidence lead to the prediction that academic risk-taking activities are a powerful means of increasing the success of our educational efforts. But how do we get students to take risks on school-related activities? Students will choose risk over certainty when the consequences of the former are more satisfying and informative. Three basic conditions are needed to ensure such outcomes.

- First, students must be allowed to freely select from materials and activities that vary in difficulty and probability of success.
- Second, as task difficulty increases, so too must the payoffs for success.
- Third, an environment tolerant of error making and supportive of error correction must be guaranteed.

The first two conditions can be met rather easily. For example, on a 10-point quiz, composed of six one-point items and four two-point items, students might be asked to select and work only six items. The highest possible score for such quizzes is 10 and can be obtained only by correctly answering the four two-point items and any two one-point items. Choice and variable payoff are easily built into quizzes and many instructional and evaluation activities.

The third condition, creating an environment tolerant of error making and supportive of error correction, is more difficult to ensure. But here are six specific suggestions.

First, teachers must make a clear distinction between formative evaluation activities (tasks that guide instruction during the learning process) and summative evaluation activities (tasks used to judge one's level of achievement and to determine one's grade at the completion of the learning activity). Practice exercises, quizzes, and skill-building activities aimed at acquiring and strengthening knowledge and skills exemplify formative evaluation. These activities promote learning and skill development. They should be scored in a manner that excludes ability judgments, emphasizes error detection and correction, and encourages a search for better learning strategies. Formative evaluation activities should generally provide immediate feedback and be scored by students. It is on these activities that moderate risk taking is to be encouraged and is likely to prove beneficial.

Major examinations (unit exams and comprehensive final exams) exemplify summative evaluation; these activities are used to determine course grades. Relatively low risk taking is to be expected on such tasks, and immediate feedback may or may not be desirable.

Second, formative evaluation activities should be far more plentiful than summative. If, in fact, learning rather than grading is the primary objective of the school, the percentage of time spent on summative evaluation should be small in comparison to that spent on formative evaluation (perhaps about 1:4). There should be enough formative evaluation activities presented as risk-taking opportunities to satisfy the most enthusiastic and adventuresome learner. The more plentiful these activities are, the less anxiety-producing and aversive summative activities are likely to be.

Third, formative evaluation activities should be presented as optional; students should be enticed, not mandated, to complete these activities. Enticement might be achieved by (a) ensuring that these activities are course-relevant and varied (e.g., scrambled outlines, incomplete matrices and graphs, exercises that require error detection and correction, quizzes); (b) giving students the option of working together; (c) presenting risk-taking activities in the context of games to be played individually, with competitors, or with partners; (d) providing immediate, informational, nonthreatening feedback; and (e) defining success primarily in terms of improvement over previous performance or the amount of learning that occurs during the risk-taking activity.

Fourth, for every instructional and evaluation activity there should be at least a modest percentage of content (10 percent to 20 percent) that poses a challenge to even the best students completing the activity. Maximum development of a country's talent requires that *all* individuals (a) find challenge in tasks they attempt, (b) develop tolerance for error making, and (c) learn to adjust strategies when faced with failure. To deprive the most talented students of these opportunities is perhaps the greatest resource-development crime a country can commit.

Fifth, summative evaluation procedures should include "retake exams." Second chances will not only encourage risk taking but will provide good reasons for students to study their incorrect responses made on previous risk-taking tasks. Every error made on an initial exam and subsequently corrected on a second chance represents real learning.

Sixth, we must reinforce moderate academic risk taking instead of error-free performance or excessively high or low risk taking. Improvement scores, voluntary correction of errors, completion of optional risk-taking activities—these are behaviors that teachers should recognize and encourage.

Toward a New Definition of Success

We face the grim reality that our extraordinary efforts to produce "schools without failure" have not yielded the well-adjusted, enthusiastic, self-confident scholars we anticipated. Our efforts to mass-produce success for every individual in every educational situation have left us with cheap reproductions of success that do not even faintly represent the real thing. This overdose of synthetic success is a primary cause of the student apathy and school abandonment plaguing our country.

To turn trend around, we must emphasize error tolerance, not error-free learning; reward error correction, not error avoidance; ensure challenge, not easy success. Eventual success on challenging tasks, tolerance for error making, and constructive responses to failure are motivational fare that school systems should be serving up to all students. I suggest that we engage the skills of researchers, textbook authors, publishers, and educators across the country to ensure the development and marketing of attractive and effective academic risk-taking materials and procedures. If we convince these experts of the need to employ their creative efforts toward this end, we will not only stem the tide of educational suicide, but we will enhance the quality of educational success. We will witness self-regulated student success and satisfaction that will ensure the intellectual, creative, and motivational well-being of our country.

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Parent Involvement

Doing Their Homework

by Melanie Lewis

Reprinted with permission from *The Dallas Morning News* (November 23, 1991).

A room decorated with crayon drawings, bright posters, toys and books holds hope for a new era in the Dallas Independent School District.

But the classroom in the basement of Nolan Estes Plaza isn't for youngsters. It's to help parents learn how to become more involved in their children's education.

The room is one of three Parent Resource Centers opening Saturday as part of the district's efforts to involve more parents in schools.

"We hope to get parents into the center and then into their schools as part of the PTA or as a volunteer," said Cynthia Small, the district's parent-training coordinator and director of the Nolan Estes center in Oak Cliff.

The two other centers will be at the old Crockett and DeGolyer elementary schools in central and northwest Dallas. By year's end, the district plans to have centers in 25 schools. One day, a Parent Resource Center should be in every school, organizers said.

At the centers, parents can make games to take home to help teach math, borrow books on fathering or on parental effectiveness and receive pamphlets on how to help with homework.

They also can borrow books to read to their children at home or read to them in a cozy make-believe living room at the Nolan Estes center.

The centers are part of a growing trend in school districts across the state and the country to provide parents with the tools that they need to be more involved. Plano schools have had a parents' center since 1986.

Schools can no longer afford to have parents serve only as fund-raisers, and parents no longer want to settle for just that role, said Arturo Pena, the DISD's executive director of parent training.

"We want them to get into some more critical and complex areas," Mr. Pena said.

But center directors don't want parents to be scared by that idea. Most of the strategies aren't all that complicated, Mr. Pena said.

They already know most of the information the centers offer, but they just don't see the connection to their child's academic achievement, he said.

For example, instructors will show parents how an everyday shopping trip can be used to improve children's math skills. If children pick out an item, they can tell the parent how much it costs or how much it saves over other brands.

Fixing a child's breakfast or packing a lunch shows the child that the parent is involved.

"These are simple ideas, and we will show them how they can extend what they are doing so children can learn," Ms. Small said.

It's something most parents need, organizers said.

"No one taught us how to be parents," said Dale Landis, a parents' ombudsman at Lipscomb Elementary School in East Dallas. "It's time we support parents in parenting, so we can get back to educating."

Parents also will learn how to work in committees, will develop decision-making skills and will receive leadership training that will teach them the ins and outs of school volunteering.

Parents are hungry for that kind of knowledge, Ms. Small said.

Shirley Daniels, a mother of seven DISD students, agreed.

"Parents don't know what to do or how to motivate their children," said Ms. Daniels, head of health and education for the Dallas City Council of Parent-Teacher Associations.

A survey of 15,000 district parents last year found the same needs.

Almost 84 percent wanted to learn how to improve their children's academic skills, and nearly 78 percent wanted homework tips.

Almost 65 percent said they needed information on how to motivate their children to learn.

"Parenting skills are the Number 1 issue for many parents," Mrs. Daniels said. "People think they know how to raise kids, but they need to see what they might be doing wrong."

Although a majority of parents said they needed help, only seven percent said they wanted a parenting center. Almost 80 percent said they wanted parenting workshops held in schools.

"That's why we only opened three centers as a model," Ms. Small said. "They will feed information to the local schools so they can open one of their own."

This is the second go-round for such parenting centers in the district.

The first effort about five years ago petered out after a few years because of a lack of staffing and little parent participation.

Ms. Small said officials are guarding against similar results this time by staffing the centers with parent volunteers.

"If we keep parents involved and make them part of the program, they will buy into it and we will be successful," she said.

Hours will be flexible, depending on when parents need the services, Ms. Small said. Similar to branch libraries, the centers will have catalogs of books and videos at the other centers that can be ordered.

"Each center will take on its own flavor and meet the needs of that particular community," said JoAnne Duncan, coordinator of the Crockett center. "We see it as an evolving process."

The centers also will offer classes for parents seeking other kinds of education. At Nolan Estes, they will be able to take computer classes. All centers will make referrals to the district's adult education program.

The district is banking on the centers' success this time as part of increased efforts to get parents involved in the schools.

This year, 10 schools are experimenting with a school-centered education system, which turns more control over to parents, teachers and campus administrators. More campuses are expected to go to that management system in future years.

A large component of school-centered education is training parents how to become involved and teaching educators how not to squelch parents' efforts.

The parenting centers will do that also.

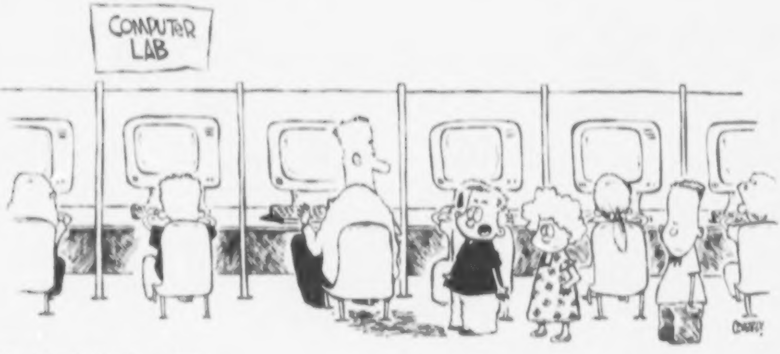
Principals and teachers will be trained on how to communicate with parents and about effective ways to get and keep them involved in their schools.

But the training won't stop there.

School secretaries, custodians and anyone else dealing with the public will be trained on how to serve them better.

Too many parents complain of standing at school counters and being ignored by office personnel, Ms. Small said.

"We want them to have good public relations skills," Mr. Pena said. ◀



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"Dad, Parent's Day was yesterday. It's my turn now."

Schools Reaching Out: Family, School, and Community Partnerships for Student Success

by Don Davies

Reprinted with permission from Don Davies and from the *Phi Delta Kappan* (January 1991).

How important is involving parents in the schools—particularly in urban schools? Is it a part of the mainstream movement to reform and restructure American schools, or is it a sideshow? As it is traditionally defined and practiced, parent involvement is not powerful enough to have a significant impact on the policies and practices of urban schools. In fact, an emphasis on traditional parent involvement can divert attention from the fact that schools and families have inadequately promoted the academic and social success of some children. But, if its definitions and practices are redefined, parent involvement can make a powerful contribution to efforts to reform urban schools and to achieve our national aim of providing a successful school experience for all children of all backgrounds and circumstances.

New Approaches to Parent Involvement

In recent years progress toward redefining parent involvement and linking it to school reform has been made on several fronts. James Comer, a Yale University psychiatrist, and his colleagues in several states have been working to reform schools that serve poor and minority children. Comer believes that, for these schools to be effective, parents must play a major role in all aspects of school life, particularly management and governance. He insists on the

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importance of fostering teacher/student/parent relationships in a democratic setting, and he emphasizes that teachers, families, and specialists must work together to promote the social and emotional as well as the academic growth of children.[1]

Henry Levin's accelerated schools model, first applied in San Francisco and in Redwood City, California, and now being expanded to a network of schools across the country, sets specific achievement goals for all children to meet by the end of the elementary years. Levin emphasizes comprehensive changes in curriculum, instruction, organization, and school management, with parents playing central roles both as resource people and as decision makers.[2]

Through many studies and a multi-school project in Baltimore and other cities, Joyce Epstein has developed and is testing a model of school and family connections that consists of five types of involvement: (1) the basic obligations of parenting (responsibility for children's health, safety, supervision, discipline, guidance, and learning at home); (2) the basic obligation of schools to communicate with the home; (3) the involvement of parents at school as volunteers, supporters, and spectators at school events and student performances; (4) parent involvement in learning activities at home—facilitated by Epstein's program, Teachers Involve Parents in Schoolwork; and (5) parent involvement in school decision making, governance, and advocacy. A sixth kind of connection is under investigation for its contribution to school/family relations: collaboration and exchanges between schools and community organizations, agencies, and businesses. Epstein emphasizes the concept of overlapping spheres of influence and responsibility.[3]

Dorothy Rich's Home and School Institute sponsors projects in several school districts that assist parents in fostering children's learning at home.[4] And David Seeley has made important contributions to redefining parent involvement to encompass a wide range of family/school/community/learner partnerships.[5]

The "family support" movement has several well-known advocates at major university research centers, including Edward Zigler and Sharon Lynn Kagan of the Bush Center in Child Development and Social Policy at Yale, Heather Weiss of the Family Research Project at Harvard, and Moncrieff Cochran and his colleagues at Cornell. Family support programs, aimed at strengthening all aspects of the child's development, stress parent education at home and help parents connect with natural support systems. Many of the programs have links with school systems or early education programs, stimulated by the success of Missouri's statewide Parents as Teachers program. All of these efforts are, in part, responses to social changes that have left today's parents with less access to help and advice than parents of earlier generations had through extended families and close-knit communities.[6]

Each of the scholars and projects mentioned above is distinctive. Most have their own orthodoxies, and some have become the equivalent of brand names. But the commonalities outweigh the differences and add up to a new definition of what has usually been called "parent involvement." Three common themes are of central importance:

1. **Providing success for all children.** All children can learn and can achieve school success. None should be labeled as likely failures because of the social, economic, or racial characteristics of their families or communities.

2. **Serving the whole child.** Social, emotional, physical, and academic growth and development are inextricably linked. To foster cognitive and academic development, all other facets of development must also be addressed by schools, by families, and by other institutions that affect the child.

3. **Sharing responsibility.** The social, emotional, physical, and academic development of the child is a shared and overlapping responsibility of the school, the family, and other community agencies and institutions. In order to promote the social and academic development of children, the key institutions must change their practices and their relationships with one another.

Schools Reaching Out

The Institute for Responsive Education (IRE) used these three themes as keynotes for a national project called Schools Reaching Out. The project, supported by five foundations (Leon Lowenstein, JM, Aaron Diamond, the *Boston Globe*, and the John D. and Catherine T. MacArthur Foundations), set as its purpose to redefine and expand parent involvement as a part of urban school reform.

The project began two years ago with two demonstration schools: the David A. Ellis Elementary School in Roxbury, Massachusetts, and P. S. 111 on the West Side of Manhattan. It has expanded into the League of Schools Reaching Out, with a current membership of 41 elementary and middle schools in 19 urban school districts in 13 states and Puerto Rico. The league subscribes to no single orthodoxy, but its members share a commitment to the three themes sketched above. The league schools will be considering issues raised in seven reports written by researchers for the project, who gathered data not only in the two demonstration schools but also in other member schools.[7] The schools are starting to put together new and broader definitions of parent involvement.

- The new definitions go beyond the term *parent*, which is too narrow to describe today's reality. *Family* is a more encompassing term. The most significant adults in the lives of many children may be grandparents, aunts and uncles, brothers and sisters, or even neighbors who provide child care.

- The new definitions go beyond parents or families to include all of the community agencies and institutions that serve children. Urban families need support and assistance—particularly those under stress because of economic hardship, the struggle to find adequate housing, or barriers of language and social custom. Urban schools also need support and assistance to understand families, and communities can contribute a great deal to children's academic and social development.

- The new definitions go beyond having family members come to the school. Activities and services include those that occur at home and in neighborhood settings as well.
- The new definitions include not only those parents who readily respond to teacher and school initiatives but also the families that schools consider "hard to reach." The latter group (which in some schools encompasses a majority of families) includes those who lack the energy, time, self-confidence, or English-language proficiency to take part in traditional parent involvement activities, as well as those who are fearful of schools because of past experiences or cultural norms. In most schools, activities that fit the old definitions of parent involvement engage only a relatively small number of parents, who provide leadership and service and who are aware of the advantages of such involvement to themselves and their own children. And, of course, it is their children who benefit the most.
- The new definitions go beyond the agendas and priorities of teachers and school administrators to include the priorities of families themselves, and they extend beyond specifically academic activities to include all the contributions that families make to the education of their children.
- The new definitions of parent involvement in urban schools replace the old "deficit" views of the pathologies, traumas, and troubles of urban families and communities with a new mindset that emphasizes the inherent strengths of families. Improving the capacity of urban families to foster the social and academic growth of their children means building on the strengths of those families and of their diverse, multicultural communities. Cultural differences are not diseases to be treated but healthy opportunities for learning. The new definitions recognize that all families can be more effective in all aspects of childrearing.

The League of Schools Reaching Out invites schools to choose among the brand-name approaches to building school/family/community relationships and to improving schools or to mix and match these and others with their own inventions to create new models—as long as these models focus on helping all children (not just some of them) succeed and on using family and community interventions and partnerships to help reach this goal. The new definitions should take the league schools beyond the traditional view of "parent involvement" as a desirable end in itself and move them toward involvement as a means of improving school outcomes, particularly the academic achievement and social success of children.

I do not claim that the path of shared responsibility and partnerships is the *only* valid approach to reforming and restructuring schools. League members have worked with the IRE to search for practices that work. The schools will help one another understand, develop, and test new strategies that give practical meaning to the general concepts of providing success for all, serving the whole child, and sharing responsibility.

From the work accomplished thus far in the Schools Reaching Out project, I propose a three-part strategy for league schools and for other schools that want to move toward partnership. Three ideas that were found to work in the demonstration elementary schools of this project can be adapted to almost any school without necessarily waiting for the central office to invest heavily in parent involvement or to begin the process of systemwide restructuring. They are: (1) the parent center, (2) home visitors, and (3) action research teams of teachers.

The Parent Center

Sara Lawrence Lightfoot got it right: "The presence of parents can transform the culture of a school." At the Ellis School in Boston, the parent center—a room for parents—was a low-cost success. Some of the project's researchers said that the school was "a different place" because the parent center existed. It made possible the substantial, continuing, and positive physical presence of family members in the school. The tone and content of school conversations about parents and their communities change when parents are physically present in the building. It is difficult for school employees to say, "The parents just don't care," when caring parents can be seen daily.

Staffing the center were two paid coordinators (both of them parents of children in the school), as well as a number of unpaid volunteers. Parent visitors dropped in for coffee, a chat, and information; the center also sponsored English-as-a-second-language (ESL) and General Education Development (GED) classes for parents. Parents reported feeling more positive about the school and about being involved in their children's education because they had a welcoming "place of their own" in the school.

School administrators and teachers used the center as a resource. For example, through the parent center they could reach a mother whose child was in emotional distress, make arrangements for a school open house, order teaching materials, or offer comfort to children in moments of crisis.

Ellis School provides good examples of the kinds of specific activities in which a parent center might be involved. About 150 of the school's 350 families were directly reached by parent center activities during the year. The Ellis center:

- offered ESL and GED classes—both requested by parents and both well-attended
- organized grade-level breakfasts that brought together teachers, administrators, and family members to talk informally and in a nonthreatening atmosphere about curriculum, grade-level objectives, and classroom concerns
- sponsored breakfasts for fathers, designed to bring male family members to the school to discuss the contributions that men can make to children's motivation and academic interests
- served as an escort and referral service for dozens of parents who needed help in dealing with social service, housing, and health agencies

- organized a clothing exchange and a school store-on-a-cart
- organized a small library of books and toys for children
- recruited parent volunteers requested by teachers

What are the requirements for a workable parent center? Based on our experience at Ellis, the requirements are simple.

1. **A physical space.** At Ellis, the center was located in a small classroom.
2. **Adult-sized tables and chairs.** At Ellis, there was also an old but comfortable sofa that someone had donated.
3. **A paid staff of parents.** At Ellis, there were two part-time coordinators, paid $10 per hour; at least one of them was present from just before school started in the morning until the school building closed at 4 p.m. Project funds paid for the staff salaries, but Chapter 1 funds can be used for parent workers, as can other state and federal funds.
4. **A telephone.** A phone is a low-cost but crucial piece of equipment to encourage school/family/community connections. At Ellis, the center's telephone was one of only two in the building and thus served as a magnet that drew teachers to the center.
5. **A coffee pot, a hot plate, and occasional snacks.** It is generally agreed that food eases conversation, sharing, and conviviality.

A parent center can be organized in any school. The cost is low: money from Chapter 1 and other special programs can be used, or small grants from local businesses or foundations may be obtained. The school district must provide—and protect—the space. A parent center is a useful way to encourage the sharing of responsibility for children's education.

Home Visitors

Family support programs and research on families with children in the elementary and middle grades have shown that families of all socioeconomic, racial, and ethnic groups want to learn more about how to help their children learn and succeed. What families do (rather than what demographic groups they fall into) affects children's learning. Behaviors linked to children's success include parents' positive reinforcement of children's academic efforts, super-vision of homework, and reading, talking, and telling stories.

Since most families want to help their children learn and since family help is a positive factor in children's learning, schools should reach out to families in homes and in neighborhood settings to provide information, materials, and guidance to that large constituency that does not come to the school. A home visitor program, the second successful element in the demonstration elementary schools in the Schools Reaching Out project, makes this service possible. At Ellis School, a home visitor program reached 75 families that had little other contact with the school and that said they would welcome such visitors.

Who were the home visitors? The school recruited and trained four women residents of the community who had experience in such community work as adult education, counseling, or the care and education of young children. They were paid $10 an hour, and they visited four to five families a week.

What did they do? They were not social workers or truant officers. They provided information to families about school expectations, the curriculum, rules, and requirements, and they dispensed advice and materials on how family members could help children with their schoolwork. They reinforced the school's Raise a Reader program, in which parents were encouraged to read regularly to their children at home. The home visitors also provided information and referrals on topics ranging from housing and health services to summer camps and childrearing. They listened to family members' concerns and heard about their needs and interests, which they in turn conveyed to the teachers. The home visitors met with groups of teachers, many of whom treated them like colleagues and joined them in discussing strategies for helping with homework, dealing with parents' questions about schoolwork, and fostering children's language development.

There are a few requirements for a home visitor program.

1. A new definition of parent involvement is needed that is not limited to traditional parent activities in the school building. In addition, families must be viewed not as deficient but as sources of strength.

2. Funds are needed to pay the home visitors. As long as a program's focus is on improving student achievement, as it is in the Schools Reaching Out project, the school should be able to use Chapter 1 funds or funds for bilingual education for this purpose.

3. Training must be provided to the home visitors. Colleges, universities, and social service agencies are likely to have staff members who are interested in the program and who are willing to provide several hours of training so that home visitors can have a clear view of their responsibilities and the essential skills they need to help families help their children succeed.

4. A modest amount of supervision and support is needed. The principal, a Chapter 1 or bilingual teacher, or the coordinator of the parent center must oversee the program and supervise the home visitors.

5. Administrators and teachers must be willing to communicate with the home visitors so that their work in students' homes will be closely linked to classroom and school objectives.

Given such modest requirements, just about every urban school should be able to implement this practice. Through home visits, many families that are not linked to the school can be engaged in a collaborative effort to boost the chances for their children to succeed.

Action Research Teams

The third successful innovation in our demonstration elementary schools was the establishment of action research teams to involve teachers directly in studying home/school/community relations and in devising actions to improve their own practices. School/family/community partnerships will amount to little more than empty rhetoric unless teachers help design the partnerships, are devoted to making them work, and eventually find themselves benefiting from them.

Some approaches to parent involvement, such as the parent center and the home visitor program, engage parents and paraprofessionals. But without teacher participation, the partnership idea is seriously incomplete. The action research teams of teachers operate on the assumption that change and improvement in schools are most likely to occur when there are opportunities for teachers to work together collegially, with time for reflection and with support for trying new strategies. In both Ellis School and P.S. 111, Jean Krasnow found that "the process of enabling teacher researchers [to work] together in small problem-solving groups, using action research techniques, may be an innovation that in itself produces new thinking and reflection in the school."[8]

What are the features of this strategy? In both of the demonstration schools a researcher/facilitator organized a group of four teachers who met at least monthly. After doing some background reading in parent involvement and undergoing other training activities, the action research team in each school interviewed the rest of the faculty to determine how teachers felt about parents and parent involvement, what past activities had been successful (or not successful) in involving parents, and what concerns teachers had about increasing parent involvement. The studies uncovered some of the inevitable ambivalence and tensions that surround the idea of parent involvement—mixed feelings that are always present but often not dealt with by teachers.

The teams used the results of the interviews to design several projects aimed at increasing collaboration between the school and its families. One of the projects, called Raise a Reader, bought children's books—as well as cloth to make tote bags in which primary students could carry books to and from school. The action research team also came up with the idea of awarding a series of minigrants (each totaling $150 to $200) to teachers who were not on the team to encourage them to reach out to families in a variety of ways that would enhance children's learning. This strategy produced a number of imaginative activities at little cost.

The research teams and the minigrants were teacher-controlled, nonbureaucratic mechanisms. Each teacher on a team received a stipend of between $400 and $600—a modest amount but a concrete acknowledgment of a professional effort.

Action research teams of teachers require just a few changes in a school and its staff.

1. At least a small number of teachers must be willing to engage in the process of improving parent involvement.

2. Funds for small grants or stipends to teachers are necessary. These may be available from a local source.

3. A researcher/facilitator who is sensitive to teacher concerns can help teachers write proposals, design interviews, analyze and write up results, and lead discussions that will encourage reflection. There might be teachers or administrators already on a school's staff who understand the process well enough to serve as facilitators. A local university would be a good place to look for a volunteer or a low-cost facilitator—a faculty member or a graduate student could use the activity as a research opportunity. Another possible source of expertise is a school district's central office staff. Volunteers might also come from a local corporation, a community organization, or a senior citizens center.

Some schools in the League of Schools Reaching Out are considering modifying the concept of action research to include parents as members of the research teams. The assumption is that bringing parents and teachers together to study problems of home/school relations will be beneficial to a school's overall plan of sharing responsibility.

Putting It All Together

The potential of a parent involvement program will be enhanced if it is treated as an integrated strategy with three distinct features: a means of attracting family members to the school (the parent center); a means of reaching families at home (the home visitors); and a clearly supported, teacher-controlled way of engaging teachers in improving curriculum and instruction through the creation of new kinds of connections with parents and other community resources (the action research team).

Just about any school, urban or not, can apply the three-part strategy of the Schools Reaching Out program. The costs are relatively low, and schools may be able to use outside funds, such as those from Chapter 1, to cover a large portion of the expense. No "superstar" principals or teachers are required.

Just about any school can arrange for parents, teachers, and administrators to participate together in planning, decision making, and governance. The laboratory school in New York, P.S. 111, developed an effective School/Community Planning and Policy Council, which included parents and representatives of the community and became a strong asset to the school's outreach efforts. The council linked those efforts to the overall school improvement plan, which focused on strengthening teaching and the curriculum in the language arts. Such councils may help pave the way for more fully developed school-based management.

No school's outreach strategy will be complete—conceptually or politically—until educators and parents learn how shared decision making can help them "put it all together." Most past efforts toward school-based decision making have been a disappointment. Such disappointment is likely to continue unless collaborative approaches to governance—like other forms of outreach—are integrated into an overall school restructuring effort that encompasses all aspects of school life.

Leadership

In any school—including those in the League of Schools Reaching Out—leadership is essential if a school staff is to choose the partnership approach to school reform and to develop an understanding of the basic concepts of providing success for all children, serving the whole child, and sharing responsibility. However, these concepts are still radical in most urban schools. The choice to move in the direction suggested by this article should be made by a broad spectrum of the constituents in a school and its community, not just by the principal. However, in most cases the leadership to reach out to the community will have to come from the principal, with the involvement of at least some of the teaching staff. According to the traditions of bureaucratic practice, leadership rests with the principal and will continue to do so until school-based management and other restructuring activities are much more widely implemented.

The administrators and teachers who are most likely to reach out to the community are those who have a sense of the urgency of the nation's urban educational and social problems, who are willing to see themselves as part of both the problem and the solution, who don't find outrageous the belief that all children can learn and succeed, and who see that teachers and administrators can benefit from improved connections with families. Sharing responsibility for children's learning and development can reduce the burden, the isolation, and the stress felt by so many hard-working and dedicated school professionals today.

The League of Schools Reaching Out offers a network of information, support, encouragement, recognition, and opportunities for research and pilot projects. It is a way for busy administrators, teachers, and parents to share experiences about what works and what doesn't. Through the league's mechanisms—a newsletter, a journal, and other publications; technical assistance; videos; computer bulletin boards; and video conferences—schools can draw on the theoretical and practical ideas that have been derived in recent years from the work of Comer, Epstein, Levin, Rich, Kagan, Zigler, Cochran, Weiss, Seeley, IRE's Schools Reaching Out, and others.

Members of the league have an opportunity to help one another pull together the diverse strands and recognize the commonalities in the progress that has been made toward new definitions and practices of parent involvement. In doing so, they will be moving toward realizing the ideal embodied in an old African saying: "The whole village educates the child."

Notes

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3. Joyce L. Epstein, "How do we improve programs of parent involvement?," *Educational Horizons* 66 (1988), pp. 58–59; Joyce L. Epstein and Susan L. Dauber "School programs and teacher practices of parent involvement in inner-city elementary and middle schools," *Elementary School Journal* 91, no. 3 (January 1991), pp. 289–305; Joyce L. Epstein, "Toward a theory of family-school connections: Teacher practices and parent involvement," in Klaus Hurrelman, Franz-Xaver Kaufman, and Friedrich Losel, eds., *Social Intervention: Potential and Constraints* (New York: de Gruyter, 1987), pp. 121–136; idem, *Teacher's Manual: Teachers Involve Parents in Schoolwork (TIPS)* (Baltimore: Center for Research on Elementary and Middle Schools, Johns Hopkins University, 1987); and Joyce L. Epstein and Susan L. Dauber, *Evaluation of Students' Knowledge and Attitudes in the Teachers Involve Parents in Schoolwork (TIPS) Social Studies and Art Program*, Report 41 (Baltimore: Center for Research on Elementary and Middle Schools, Johns Hopkins University, 1989).

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5. David S. Seeley, *Education Through Partnership: Mediating Structures and Education* (Cambridge, MA: Ballinger, 1981); and idem, "Are schools that are 'reaching out' restructuring?," *Equity and Choice* 6 (1990), pp. 38–43.

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7. See the following articles in the spring 1990 issue of *Equity and Choice*: Martin G. Brooks and Richard A. Sussman, "Including parents in the schools: How can 'third party' interventions make a difference?," pp. 44–55; Don Davies, "Shall we wait for the revolution?: A few lessons from the Schools Reaching Out project," pp. 68–73; Dolores S. Goode, "The community portrait process: School-community collaboration," pp. 32–37; Jean Krasnow, "Building new parent-teacher partnerships: Teacher researcher teams stimulate reflection," pp. 25–31; David S. Seeley, "Are schools that are 'reaching out' restructuring?," pp. 38–43; Susan M. Swap, "Comparing three philosophies of home-school collaboration," pp. 9–19; and Shepherd Zeldin, "The implementation of home-school-community partnership policies: Policy from the perspective of principals and teachers," pp. 56–63.

8. Krasnow, p. 31. ◀

District Leadership in Parent Involvement: Policies and Actions in San Diego

by Janet H. Chrispeels

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Administrators, teachers, and parents all say that they want parents to be more involved in their children's education.[1] Translating the rhetoric of increased parent involvement into action, however, has proved difficult, especially in schools with large percentages of racially diverse students from low-income families.

The involvement of middle-class parents has long been the norm for American education. Interdependence and interaction seem to grow naturally between these parents and their schools.[2] Teachers expect that most middle-class families will support their children's learning at home, in the community, and at school. In fact, many of the characteristics associated with effective schools—high expectations, opportunities to learn, an emphasis on academics, a safe and orderly environment, frequent monitoring of student progress, and rewards and recognition for achievement—are matters of course in the homes and communities of middle-class students as well as in their schools.

Recognizing the power of parent support to enhance student achievement, since the mid-1960s educators and policy makers have tried, by means of various federal and state legislative mandates, to replicate the conditions of middle-class parent involvement in schools serving largely low-income students. The main purpose of including parent involvement policies in regulations governing a variety of federal initiatives—including Head Start (1964); Follow Through (1967); the Elementary and Secondary Education Act (1965); the Bilingual Education Act (1968); and the Education for All Handicapped Children Act (1975)—was to improve student achievement in school. At the state level,

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the California legislature mandated parent participation in early childhood education programs in 1972 and expanded participation requirements in 1976 when the state's school improvement program was established.

But all these attempts to mandate parent involvement have had only minimal impact on the achievement of low-income students.[3] Research has shown that, when parent involvement programs are well-designed, they can have a positive effect on student achievement.[4] In many instances, however, administrators' and teachers' low expectations for and negative attitudes toward low-income or non-English-speaking children and their parents have prevented the development and implementation of well-designed programs.[5] As Milbrey McLaughlin and Patrick Shields point out, "It is not clear that policy can mandate the things that matter."[6]

Despite the difficulty of moving from the level of policy to high-quality parent involvement at the school level, new policy initiatives are being undertaken in California at both the state and district levels. Although policies cannot mandate changes in beliefs, they can serve several useful functions. First, policies create an institutionally sanctioned framework to guide practice by determining, for example, what type of parent involvement activities should have priority. Second, policies express "official" beliefs that can, over time, influence the beliefs of others. Third, policies supported by effective strategies for implementation can apply pressure for change by recognizing, supporting, and rewarding specific attitudes and behaviors.

In California the state department of education and several local districts have adopted policies that provide a clearer definition of parent involvement. This development is significant because one of the biggest barriers blocking the development of successful programs is that groups that must work together have different understandings of the concept. Administrators often equate parent involvement with fund raising or with participation on school advisory groups. Teachers think of parent involvement as sending children to school on time, attending parent/teacher conferences, helping with homework, and responding to teacher requests. Parents want to be kept better informed about their children's progress, would like to be welcomed more openly at the school and in the classroom, and want information each year about how they can help their children be more successful in school.[7]

The new state and district policy initiatives in California recognize that effective parent involvement is multifaceted and requires active efforts on the part of schools. This article describes how the coordination of state, district, and individual school efforts to enhance parent involvement may eventually lead to improved student achievement.

State Policy

The California State Board of Education adopted a policy on parent involvement in January 1989. The policy guides the efforts of the state department of education and local districts to strengthen family/school partnerships.

Its comprehensive approach recognizes parents' multiple roles; the policy calls for programs and actions that help parents develop parenting skills, give them information on how to foster their children's learning, use community resources to support families and students, promote two-way communication between home and school, involve parents at school as volunteers in both instructional and support activities, and involve parents in school governance and in advocacy roles.

The parent involvement unit of the state department has been implementing the state board's policy in various ways. First, it sponsored a series of regional conferences to explain the policy, to present parent involvement research from around the country, and to share strategies that local school districts have found successful. From 200 to 500 parents, teachers, principals, and district administrators attended each conference. Second, the unit has been providing technical assistance and support to local districts and schools by disseminating information and research on parent involvement. Third, in a unique collaborative effort, the parent involvement unit joined with the University of California to establish a joint committee on parent involvement. This body has undertaken a number of projects, including co-sponsoring parent involvement conferences with local school districts in six counties and publishing booklets for parents in English and Spanish. Under the committee's aegis, representatives from the education departments of the nine University of California campuses participated in two symposia exploring the kinds of preservice and inservice training that would enable teachers to work effectively with families from all socioeconomic levels.

County Support

The state's efforts are supported and extended by the county offices of education, the intermediate level of the education structure in California. These offices perform many functions that are typically the responsibility of school districts (or other intermediate units) in other states, including serving as conduits for delivering information to schools.

The San Diego County Office of Education provides a good example of how an intermediate unit can support schools' efforts to involve parents. The office has played three major roles: information clearinghouse, source of direct services to parents, and source of direct services to districts and schools in the form of staff development and assistance in planning.

Information clearinghouse. For the past three years, the county office has shared information on parent involvement by holding annual countywide conferences. School teams composed of the principal and selected teachers, resource staff members, parents, and community representatives attend the conferences to learn about exemplary programs and to work together to plan programs for their own schools.

The county office also gathers information and makes it available through publications—some for parents and others for staff. One of the county's publications, *Communicating with Parents*, provides 300 pages of ideas and strategies to help administrators and teachers develop comprehensive parent involvement programs at both the school and classroom levels.[8]

Direct services to parents. In addition to sponsoring conferences for parents and educators, the county office has installed a telephone information system specifically for parents. Called EdInfo, the service offers 75 prerecorded messages in English and Spanish, 24 hours a day. EdInfo is funded through a grant from the Wells Fargo Bank Foundation. The messages on EdInfo address such topics as home/school partnerships, parents as teachers, tests and testing, college and careers, special programs, drug and alcohol abuse, and health issues.

The county office also uses its own educational television facilities as a way of providing information to parents. "The Parent Hour," a monthly show, features discussions with experts on such topics as discipline, self-esteem, special education, helping with reading, parent/teacher conferences, and summer learning activities. The San Diego city school district also uses the station to host a monthly call-in show, "Speaking of Schools," on which parents join Superintendent Thomas Payzant and a panel of teachers to discuss critical issues facing schools and families.

Direct services to districts and schools. The county office holds training workshops to help schools and districts implement various parent outreach programs. The county has been especially active with the Family Math program,[9] which invites parents and children to come to school one or more times a year to enjoy math games and activities together. In the last three years more than 580 teachers and parents have been trained to conduct Family Math sessions and have done so at 302 schools. Six schools (elementary and middle) in the San Ysidro area have also offered the program in Spanish.

The most recent outreach effort to receive county support has been the Family Reading program. The aim of Family Reading is to involve parents in significant learning activities at home.[10] Parent and teacher teams who were trained by the county in 1989–90 are currently implementing the program in their schools.

The county has also conducted workshops on such topics as using parent volunteers in the classroom, conducting parent/teacher conferences, and developing school-site parent involvement plans. In addition, the county office works in conjunction with the California School Leadership Academy (CSLA). Over the last two years, the office has presented two-day CSLA parent involvement workshops to more than 200 San Diego administrators and prospective administrators. All these efforts have reinforced state and district policies and expectations for district and school action to increase parent involvement.

District Action

With support from the state and the county offices, local districts are significantly increasing their efforts to reach out to parents to build the kinds of partnerships that will have an impact on student achievement. The Boston-based Institute for Responsive Education (IRE) recently recognized local efforts in California by inviting Montgomery Junior High School in the Sweetwater Union High School District and nine of the San Diego City Schools (SDCS) to join the League of Schools Reaching Out [see the article by Don Davies on pages 261–271 of this book]. In the spring of 1990, 150 parents and teachers from these schools participated in IRE's national teleconference on parent involvement. The parent involvement efforts of the SDCS are representative of the actions of other districts in the region.

Adopting a local policy. In early 1988 the SDCS established a task force to explore ways in which parent involvement could be strengthened in the district. The group, made up of 33 community and school representatives, became convinced that the best way to move forward was to persuade the board of education to adopt an official policy on parent involvement. The task force spent several months, sometimes in heated debate, framing a policy statement to present to the board. The policy, adopted in July 1988, is parallel to the state policy in most areas and outlines a multifaceted definition of parent involvement. The board commits itself to:

- involve parents as partners in school governance, including shared decision making and advisory functions
- establish effective two-way communication with all parents, respecting the diversity and differing needs of families
- develop strategies and programmatic structures at schools to enable parents to participate actively in their children's education
- provide support and coordination for school staff and parents to implement and sustain appropriate parent involvement from kindergarten through grade 12
- use schools to connect students and families with community resources that provide educational enrichment and support

The task force's decision to draft a policy has proved to be a wise one, giving shape and direction to district actions and to the work of individual schools. The implementation plan that flowed from the policy has focused on three major efforts: building the capabilities of staff members, creating partnerships, and providing follow-up and support services.

Building staff capabilities. The district policy clearly recognizes that building the capacities of teachers, administrators, and other school staff members to work effectively with families is a prerequisite for improved family/school partnerships.[11] In order to accomplish this goal, the district established a department to oversee the implementation of the policy and to assist the schools. One of the department's first actions was to launch a quarterly staff newsletter, *The Vital Connection*, which contains articles on parent involvement research, suggestions for school-based activities, and information on upcoming workshops. Included with the newsletter are blackline masters of articles that principals can duplicate and include in their own school newsletters for parents.

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As another aid to staff members, the department distributed copies of the county publication, *Communicating with Parents*, to schools in the district. Feeling the need to supplement this publication, the department put out its own parent involvement handbook for principals.[12] The manual discusses the district's parent involvement policy and describes steps for schools to take in developing comprehensive family outreach programs. It emphasizes that staff members' attitudes and behavior toward parents are major determinants of the level of parent involvement the school will be able to achieve.

Workshops are an essential component of staff development in parent involvement. Those for principals and assistant principals introduce them to the handbook and to other district resource materials. Staff members at different schools have participated in the Lee Canter and Associates training program, Parents on Our Side. The new department responsible for parent involvement programs is using a trainer-of-trainers model with such programs as Family Reading, Parents Growing Together, and Living with 10- to 15-Year-Olds.[13] Other workshops are planned in the areas of parent/teacher conferences, family-friendly homework and study skills, and developing parent involvement plans.

Creating partnerships. The goal of strengthening staff members' capabilities is to build stronger partnerships with parents at each school. In the fall of 1989 the SDCS board of education took a more direct step to foster partnerships by allocating $100,000 for parent involvement incentive grants. From 58 applications, the district's parent involvement task force awarded 16 grants ranging from $1,500 to $10,000. Nine of the grants were for innovative projects, and seven were for projects linking schools with community agencies to provide parenting programs.

The innovative grants encompassed a wide variety of creative approaches to building family/school partnerships. For example, Oak Park Elementary School found that an effective way to involve parents from diverse cultural backgrounds was to train representative parent and teacher facilitators who could meet with each ethnic and racial group separately to brainstorm, to solve problems, and to discuss issues and concerns. As a result, each group felt for the first time that it was important and that its views counted. After the separate meetings, the school held a joint session to develop a parent involvement plan. Parents and teachers were surprised to see that all groups shared common concerns and needs.

A second school, Torrey Pines Elementary, used some of its incentive grant money to implement a hands-on science program developed and conducted by parent volunteers. In each primary class, four to six parents came to school once a week to spend 1½ hours leading small groups of students in science activities. The groups covered a single topic, such as space, ecology, or earth science, every six weeks. The science lessons allowed teachers to witness successful cooperative learning groups in which Hispanic and Anglo students actively worked together. In addition, the teachers learned that, with well-designed activities, parents could be teachers, too.

Lincoln Prep High School, another grant recipient, demonstrated effective ways to link schools with the broader community. The school helped students and their families find needed community services through a school-sponsored telephone referral system. In addition, the school reached out to the surrounding feeder schools and invited parents to a series of parenting workshops. This effort not only improved parenting skills but, perhaps more important, showed parents that parent involvement needs to be sustained throughout children's school careers, including the high school years.

While not all the data on the impact of the grants have been compiled, the enthusiasm of the schools encouraged the board to continue the program for another year. For the 1990–91 school year 23 grants have been awarded for both innovative and community-based projects. The district implementation plan also calls for guiding and assisting 12 schools (representing all grade levels) in developing comprehensive parent involvement programs that can serve as models for other schools in the district.

Follow-up and support services. The district has attempted to provide follow-up and support in several ways. First, it has clarified the roles and responsibilities of the various parties charged with implementing the policy. Second, it has established parent involvement as a component of the improvement plans that all schools are required to develop. Third, the parent involvement task force has continued to meet on a monthly basis to discuss implementation issues and to serve as a sounding board for parental, community, or staff concerns.

Finally, an interdivisional staff group has been formed that brings together representatives from special education, curriculum and instruction, staff development, adult education, the School Improvement Program, Chapter 1, and other categorical programs to explore how all of the district's divisions with responsibilities for parent involvement can improve and coordinate their services and programs. For example, this year the district department that supervises parent involvement programs collaborated with Chapter 1 support staff to offer two intensive all-day workshops for Chapter 1 school teams. More collaborative activities, such as the development of a parent leadership training program, are planned for the future.

Promises and Challenges

If the success of parent involvement as a strategy for enhancing the achievement of low-income students depends so much on teachers' attitudes toward parents, will these new policy initiatives prove any more effective than previously mandated parent involvement programs? Obviously, it is too soon to tell. But several differences between current and previous initiatives bode well for the new efforts.

First, the local and state policies are similar in content and purpose. This coordinated approach should increase the impact at both levels.

Second, what have been put into place are policies, not mandates. The language of policies reflects beliefs, not demands (which tend to be viewed as burdens and to elicit minimal compliance). The implementation of policies, on the other hand, provides more flexibility to encourage innovation and to reward and recognize success.

Third, research and practice in the last 25 years have begun to identify the types of family/school partnership activities that affect student learning. For example, the earlier the intervention and the longer it is sustained, the greater the impact on student outcomes. Training parents to be tutors of their children has also been shown to increase student achievement.[14]

Fourth, the new initiatives recognize the need for staff development and training. The exact nature of that training has yet to be fully defined, but Nancy Chavkin and David Williams have made a good start by identifying some of the skills that teachers need.[15] The new initiatives also recognize that teachers must learn from the families of their students. The most important role for families from ethnically and racially diverse backgrounds may be to help teachers understand the educational experiences, customs, and values of parents as well as their expectations for their children. Opportunities for teachers to visit the homes of their students and learn directly from parents about their children may not only be the best training for teachers and parents but may also be a way to craft meaningful partnerships.

Fifth, both state and district policies stress the need for parent involvement to continue throughout the school years. The awarding of incentive grants to middle and junior high schools and to high schools is an encouraging sign that teachers and administrators at the secondary level recognize the need to strengthen family/school ties. The efforts of one high school to develop a coordinated communitywide approach involving its feeder schools are also promising.

Despite the strengths of the new initiatives, the task of changing attitudes and practices will not be easy. A recent incident illustrates the point. A committee consisting of parents, teachers, and administrators associated with a large urban high school met over a period of several months to develop a parent involvement implementation plan. Everyone recognized the need for better communication between home and school and the need to give parents easier access to teachers to discuss concerns about student progress. However, when the plan was presented to the principal, he would allocate no resources to help implement it and, in fact, felt that no changes were needed. Without leadership at each school, significant improvements in family/school relationships are unlikely to occur.

Other problems have become apparent in connection with the incentive grants awarded by the district. While the parents and staff members involved in the projects at each school were extremely positive about their activities, administrators expressed less willingness to reallocate the resources of the schools in order to continue the projects beyond the grant funding. In addition, most of the projects focused on training parents for a traditional school-based format, which has been shown to have less impact on student achievement than programs that train parents to work with their children in the home. Most schools still want parents to come to them rather than going to the parents. Most of the efforts have been directed at "fixing" parents rather than at altering school structures and practices.

Finally, neither the state, the county, nor the district has given serious consideration to documenting and evaluating its efforts. The limited funds set aside to support parent involvement do not include resources for such research. Given the scarcity of teachers' and parents' time and of resources available for family/school partnerships, it is vitally important to document the activities and approaches that truly affect the learning of low-income and less educationally advantaged students. The new parent involvement policy initiatives offer the hope that higher student achievement can be attained through increased parent involvement. It will be important to know if they are fulfilling their promise.

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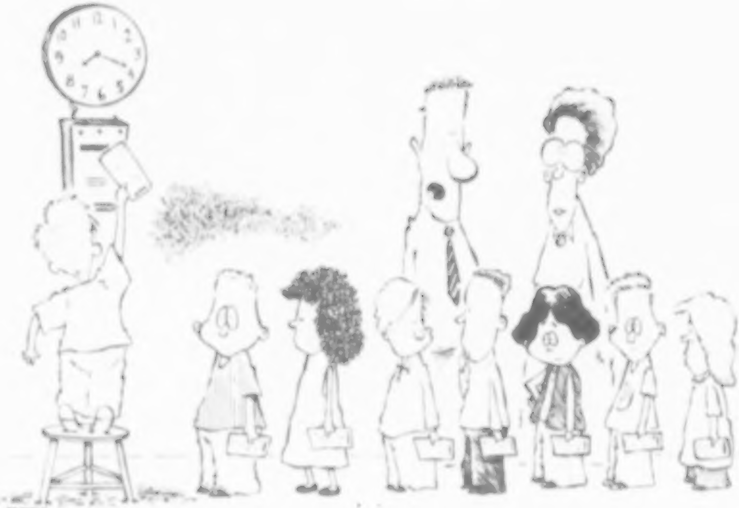

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"What do you think of the parent council's new plan for monitoring attendance?"

Productive Climate and Culture

Culture and School Performance

by Terrence E. Deal and Allan A. Kennedy

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■ *Strong schools have strong cultures evidenced by their heroes and heroines, rituals and ceremonies, and shared beliefs and values.*

We think schools can learn some lessons about productivity from the corporate world. The big message is not tight management and preoccupation with the bottom line. It's a more elusive, subtle way to approach performance.

The importance of culture is an old-fashioned idea that great business leaders have known for years (Deal and Kennedy, 1981). Many school principals also spend considerable time building cohesive school cultures. They might not label it as such, but it's precisely what they're doing. The wisdom of their efforts is supported by educational researchers who have documented the power of culture. Sarason (1971) demonstrated how school cultures can undermine innovation. When culture works against you, it's nearly impossible to get anything done. Rutter (1979) linked something called "ethos" to student achievement. Ethos, another term for culture, can produce dramatic results when it channels energy in positive directions. The problem is to make something powerful and ill-defined work for us and to show that building strong school cultures is intimately tied to improving educational performance.

What Is Organizational Culture?

Pragmatically, culture is an informal understanding of the "way we do things around here" or "what keeps the herd moving roughly west." The

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elements of culture are shared values and beliefs, heroes and heroines, rituals and ceremonies, and an informal network of priests and priestesses, storytellers, spies, and gossips. A word or two about each.

Shared values and beliefs are the soul of culture. At IBM "our business is service" is a value that influences behavior from the corporate suite to the sales force or shop floor. Values and beliefs are forged from the experiences of visionary heroes like Tom Watson of IBM or Ray Kroc of McDonalds. Values are embodied, shaped, and revised by situational heroes such as the franchisee who invented the Egg McMuffin or the local McDonalds manager whose store is exemplary in quality, service, and convenience—values that have made McDonalds one of America's fastest growing and most profitable corporations.

Rituals and ceremonies provide tangible opportunities for values to be reinforced, heroes to be celebrated, and symbols to be displayed and exchanged. In Dallas each year, Mary Kay Cosmetics holds an annual seminar where Mary Kay Ash recognizes and anoints the women who exemplify the company's values of "dream big and do it." Diamond bumblebees are awarded reminding everyone that while it is aerodynamically impossible for bumblebees to fly, the little critters don't know it. The bumblebee symbolizes the "you can do it" spirit that has made Mary Kay one of the country's leading cosmetics firms.

Cultures are reinforced and transformed by the network priests and priestesses who worry about the values, storytellers whose stories carry the values and reinforce the heroes and heroines, and spies and gossips who remind everyone that organizations are human.

Leading companies in America have, through trial and error, built cohesive cultures that provide direction, motivation, and support in human institutions. Caterpillar, McDonalds, IBM, Procter and Gamble, Tandem, General Electric, Johnson and Johnson, 3M—different companies with one common characteristic: they have strong cultures of shared values, heroes and heroines, rituals and ceremonies, and a vibrant, informal network.

Strong School Culture: A Pipedream?

There are two key reasons why strong school cultures can improve educational productivity. The first is internal: in many schools, teachers and students do not know what is expected of them nor do they understand how their actions are related to schoolwide efforts. Parents, teachers, students, administrators, and support staff often form subcultures around immediate, parochial interests that pull a school in several directions. Under such conditions it is not hard to see what happens to beliefs, standards, motivation, effort, consistency, and other ingredients essential to teaching or learning. Strong cultures provide the internal cohesion that makes it easier for teachers to teach; students to learn; and for parents, administrators, and others to contribute to the instructional process.

The second reason is external. For better or worse, schools are judged by appearance as much as by results. Internal squabbling, mixed signals, unfavorable stories, and the lack of tangible evidence that a school stands for something special make it difficult to secure the faith and support of external groups. Through shared values, heroes and heroines, rituals and ceremonies, and a supportive informal network, a school can communicate its identity to outside groups and get them involved.

What Educational Leaders Can Do

First, get to know your culture. Every organization has one, but cultures are implicit and elusive. Coming to grips with values, heroes and heroines, and the informal network can provide an interesting map of a school culture and its strength and consistency. Ask parents, students, and teachers what the school really stands for. Solicit stories about the school or school-related events. Note how people spend their time and what they pay attention to. How much time do people spend in meetings and what is discussed? What do students do at recess and after school? What happens at PTA meetings and parent nights? Who are the heroes and heroines and what values do they represent? What kinds of metaphors are used frequently in everyday conversation? What does the school building "say" about the school? Who plays what role in the cultural network? What's posted on classroom walls or written on restroom walls? Mapping a culture can be an eye-opening experience.

Second, determine how the school culture might encourage or undermine educational performance. Cultures evolve through human interaction, values can shift, anti-heroes can emerge, rituals can become ho-hum habits, subcultures can jockey for supremacy, and the informal network can undermine rather than reinforce the culture. Communities sometimes change rapidly while school cultures stay the same, resulting in a mismatch between internal and external beliefs and values. Does each group think the school stands for something different? Are parents' values different from teachers' or students' values? Is there a thread of common values across teachers or classrooms? Do teachers and students spend time on instruction or jostling for control of the classroom? Are faculty heroes or heroines exemplary teachers or chronic complainers? Are stories about the school mostly positive or largely negative? Does the principal emphasize instruction while teachers pay most attention to discipline? Do student heroes or heroines provide multiple role models or are they mainly athletes, social stars, or troublemakers? Are faculty meetings lethargic or do they provide opportunities for important values to be discussed? Are the principal's style and behavior consistent with the values he or she talks about? Are everyday metaphors about growing and learning or about surviving and punching a time card? When was the last time parents and teachers worked for a common cause? Does the school building convey what is really going on inside? Cultural patterns that everyone wants can be strengthened, cultures that have become weak or inappropriate need to be revised.

Third, plan occasions where people can come to grips with values that need to be re-examined or changed.

The Principal's Role

Effective principals are symbolic leaders who pay attention to small, but important, cultural details. Consider a few: Reflecting desired values in everyday speech and behavior. Anointing heroes and heroines among teachers, students, and parents who exemplify these values. Telling the story of the school's origins or about the person for whom the school was named. Setting aside time in faculty meetings to talk about values and philosophy. Taking the time to introduce a new teacher, student, or parent to the school's culture. Arranging a parents night so that values and heroes or heroines can be celebrated in style. Preparing a retirement party so that it reinforces values and beliefs embodied in an elder leaving the culture. Telling stories about a student whose reading improved dramatically and giving other storytellers an opportunity to relate such tales in public. Writing a personal note to a student who has done something special. Publicly recognizing a teacher who has gone out of her way to help a student. Organizing a day-long session where students, teachers, parents, and community residents can discuss the values and beliefs of the school.

Little things like these can, over time, transform a school culture. And a strong culture will yield dividends in learning achievement, morale, personal growth, and other indicators of school performance.

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Good Seeds Grow in Strong Cultures

by Jon Saphier and Matthew King

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■ *Regardless of the focus of particular change efforts, schools need to nurture and build on the cultural norms that contribute to growth.*

School improvement emerges from the confluence of four elements: the strengthening of teachers' skills, the systematic renovation of curriculum, the improvement of the organization, and the involvement of parents and citizens in responsible school-community partnerships. Underlying all four strands, however, is a school culture that either energizes or undermines them. Essentially, the culture of the school is the foundation for school improvement, a view summarized by Purkey and Smith (1982):

> We have argued that an academically effective school is distinguished by its culture: a structure, process, and climate of values and norms that channel staff and students in the direction of successful teaching and learning.... The logic of the cultural model is such that it points to increasing the organizational effectiveness of a school building and is neither grade-level nor curriculum specific. (p. 68)

If certain norms of school culture are strong, improvements in instruction will be significant, continuous, and widespread; if these norms are weak, improvements will be at best infrequent, random, and slow. They will then depend on the unsupported energies of hungry self-starters and be confined to individual classrooms over short periods of time. The best workshops or ideas brought in from the outside will have little effect. In short, good seeds will not grow in weak cultures.

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Giving shape and direction to a school's culture should be a clear, articulated vision of what the school stands for, a vision that embodies core values and purposes. Examples of core values might be community building, problem-solving skills, or effective communication. These value commitments vary from community to community; what is important for school leaders to know is the role of values as the fuel of school improvement. If core values are the fuel, then school culture is the engine.

The 12 Norms of School Culture

The cultural norms listed in Figure 1 can be supported where they exist and built where they do not by leaders and staff. The degree to which these norms are strong makes a huge difference in the ability of school improvement activities to have a lasting, or even any, effect. Building these norms depends equally on teachers' will and commitment since good leadership alone cannot make them strong; but without such leadership, culture cannot begin to grow or be expected to endure.

While we discuss these norms from the teacher's point of view, because teachers are culture shapers, it is important to bear in mind that there is a student culture as well. The same 12 norms apply to the culture of the school for students, but they are a direct reflection of what adults are capable of modeling among themselves.

Wherever these norms exist, they reside in teachers' and administrators' beliefs and show up in their actions. The following are hypothetical statements that represent what teachers believe and how they behave—not idle words in philosophy documents, but real actions rooted in beliefs of most of the faculty in a school with a strong culture.

Figure 1
The Cultural Norms That Affect School Improvement

1. Collegiality
2. Experimentation
3. High Expectation
4. Trust and Confidence
5. Tangible Support
6. Reaching Out to the Knowledge Base
7. Appreciation and Recognition
8. Caring, Celebration, and Humor
9. Involvement in Decision Making
10. Protection of What's Important
11. Traditions
12. Honest, Open Communication

1. Collegiality—*"In this school the professional staff help each other. We have similar challenges and needs and different talents and knowledge. When I was having problems with cliquishness among the girls, I brought it up at lunch and got some excellent ideas from the other teachers. I wasn't afraid* *to bring it up because I know people here are on my side. If someone thinks they hear a strange noise coming from my room, they'll stop to check it out. It isn't everyone for themselves and just mind your own business.*

"I think these people are darn good at what they do. I know I can learn from them and believe I have things to offer in return. Sometimes we evaluate and develop curriculum and plan special projects together, like Esther, Lorrie, and Allen doing the one-week SCIS workshop for all of us this summer. Teaching each other sometimes requires more time to plan than 'expert-led' workshops, but it allows us to work together on a significant project. Similarly our study groups—organized around topics such as cooperative learning, thinking skills, and involving senior citizens—allow us to exchange ideas. In this school we resist the notion that teaching is our 'second most private activity.'"

2. **Experimentation**— *"Teaching is an intellectually exciting activity. Around here we are encouraged by administrators and colleagues to experiment with new ideas and techniques because that is how teachers and schools improve. And we can drop experiments that do not work and be rewarded for having tried. We are always looking for more effective ways of teaching. Just last year we published 'Opening Classroom Doors,' a booklet with short descriptions of new ideas tried in classrooms. One teacher, for example, shared how she used jigsaw activities to do cooperative learning in social studies."*

3. **High Expectations**— *"In this school the teachers and administrators are held accountable for high performance through regular evaluations. We are specifically expected to practice collegiality and to experiment with new ideas. We are rewarded when we do and sanctioned if we don't. Our continued professional development is highly valued by the school community. While we often feel under pressure to excel, we thrive on being part of a dynamic organization."*

4. **Trust and Confidence**— *"Administrators and parents trust my professional judgment and commitment to improvement—no matter how effective I already am—and show confidence in my ability to carry out my professional development and to design instructional activities. We are encouraged to bring new ideas into our classes and given discretion with budgets for instructional materials."*

5. **Tangible Support**— *"When I need help to improve my instruction, people extend themselves to help me with both time and resources. Indeed, when resources become scarce, professional development remains a priority. Around here people believe the professional knowledge and skills of teachers are so important to good schooling that developing human resources is a high and continued commitment. Despite financial constraints we still have sabbaticals, summer curriculum workshops, and funds to attend professional conferences."*

These first five norms have complicated and dependent relationships with one another. Little (1981) has written at length about the first three norms in her studies of "good schools." In these schools, leaders have high expectations that teachers will be collegial and experiment in their teaching. Rather than being dependent on fortuitous chemistry in a group (though it helps), collegiality is an expectation that is explicitly stated by the leader, rewarded when it happens, and sanctioned when it doesn't. Barth (1984) goes so far as to argue that "the nature of the relationships among the adults who inhabit a school has more to do with the school's quality and character, and with the accomplishment of its pupils, than any other factor." The importance of leaders being explicit about what they want and pressing for it is supported by recent work on school change (Loucks, 1983). While leaders need to be direct about what they expect, excellent leaders allow people plenty of latitude in choosing how they realize it:

> My interpretation of the school effectiveness literature leads me to believe that these schools are both tightly coupled and loosely coupled, an observation noted as well by Peters and Waterman in their studies of America's best run corporations. There exists in excellent schools a strong culture and clear sense of purpose, which defines the general thrust and nature of life for their inhabitants. At the same time, a great deal of freedom is given to teachers and others as to how these essential core values are to be honored and realized. This combination of tight structure around clear and explicit themes, which represent the core of the school's culture, and of autonomy for people to pursue these themes in ways that make sense to them, may well be a key reason for their success. (Sergiovanni, 1984, p. 13)

Thus, leaders might require teachers to work on expanding their repertoires of teaching skills but leave the choice of how and what up to them. Simultaneously, though, these leaders would offer tangible support—for example, one release afternoon a month—and provide a menu of options such as in-house study groups, outside speakers, tuition for attending workshops or courses, or support for individual projects.

6. Reaching Out to the Knowledge Base— *"There are generic knowledge bases about teaching skills and how students learn; about teaching methods in particular areas; about young people's cognitive and affective development; and about each of the academic disciplines. These knowledge bases are practical, accessible, and very large. Teachers and supervisors are continually reaching out to them to improve their teaching and supervision."*

There are two features of this norm we would like to highlight. The first is its aggressively curious nature. There is always more to learn, and we can respond to that understanding with energy and reach out beyond our classes or our buildings, sharing journals, attending workshops, visiting each other and other sites. A principal could model this by inviting several teachers to visit another school with him or her. Such an activity might build collegiality by bringing together teachers who don't normally work together. Indeed, as much may happen during the ride together and over lunch as happens during the visit itself.

The second feature of this norm is the reality and usefulness of these knowledge bases. The erroneous belief that there is no knowledge base about teaching limits any vision of teacher improvement. It is also isolating because in the absence of knowledge, good teaching must be intuitive; if "goodness" is inborn and intuitive, then having problems is a sign of inadequacy or too little of the "right stuff." This syndrome discourages talking about one's teaching, especially one's problems. Furthermore, if good teaching is intuitive and there's no knowledge base, what's the good of working on improvement?

But the knowledge base on teaching is very real and expanding all the time. It tells us that there are certain things that all teachers do, regardless of age group, grade, or subject. It tells us the situations or missions that all teachers have to deal with in one way or another. It also tells us what our options are for dealing with each area of teaching, and that matching behaviors and techniques to specific students is the name of the game. In some cases, it even gives us guidelines for how to go about the matching.

Teachers make decisions and act to deal with numerous aspects of their instruction and relationships with students. For example, experts agree that there are dozens of ways to gain and maintain attention, several kinds of objectives (Saphier and Gower, 1982), and over 20 models of teaching (Joyce and Weil, 1980). Because there are many ways to deal with each of the myriad of teaching tasks, skillful teaching involves continually broadening one's repertoire in each area and picking from it appropriately to match particular students and curriculums. The knowledge base about teaching is the available repertoire of moves and patterns of action in any area, available for anyone to learn, to refine, and to do skillfully.

Consider another knowledge base. Each subject has, in addition to the formal knowledge of its discipline, a how-to knowledge base of teaching methods and materials. Where it is the norm to consult the knowledge bases, teachers are reaching to learn new methods and examine the latest materials and not to find the single best ones, because there are no best ones. They seek to expand their repertoires so as to expand their capacity to reach students with appropriate instruction.

This particular norm, reaching out to the knowledge bases, is one of the least understood and most neglected. It is also one of the most powerful for rejuvenating an ailing school culture. In schools where the knowledge bases are cultivated, a common language for talking about instruction emerges. This language reduces the isolation commonly experienced by teachers (Lortie, 1972).

7. Appreciation and Recognition— *"Good teaching is honored in this school and community. The other day I found a short note from the principal in my mailbox: 'When Todd and Charley were rough-housing in the hall you spoke to them promptly and firmly yet treated them maturely by explaining the whys of your intervention. It really makes our grown-up talk about respect* *mean something when teachers take responsibility for all kids the way you do.' He just observed that incident for a minute, yet took the time to give me feedback. (Somehow it had more impact in writing, too.) Things like that make me feel there is a real value placed on what I do with students. I am recognized for my efforts and achievements in the classroom and the school."*

There are many ways this message can be sent: teacher recognition as a regular feature of school committee meetings; PTA luncheons at the beginning and end of the year for faculty and staff; short notes in teachers' mailboxes from a principal who notes something praiseworthy during a walk around the building; perhaps even superior service awards written up each year in local newspapers with stipends given annually to a few teachers. Of course, underlying these efforts should be a pay scale that is at least competitive with neighboring districts.

8. Caring, Celebration, and Humor— *"There are quite a number of occasions when we show our caring for each other and awareness of significant events in each other's lives, as well as celebrating benchmarks in the life of the school. Estelle, for example, somehow arranges a 15-minute party with some goody for every faculty member's birthday in her building. We often have these short but satisfying little gatherings in the teacher's room before the kids come in. There is a lot of humor and laughing together in this school."*

9. Involvement in Decision Making—*"I am included in certain meaningful decision-making processes in this school, especially when they directly affect me or my kids. That doesn't mean I am consulted on all policies or decisions; but to tell you the truth, I don't want to be—I'd never get all of my own work done. But when I am consulted, it's not a phony gesture; my input is taken seriously. And there are mechanisms open for me to raise issues. Last spring I asked the faculty advisory council to look at how kids were treating each other in the halls. That led to a faculty brainstorming session on the topic of school climate. I don't always get people to buy into my issues, or even ask them to. But when I do, the issues are treated seriously, and I am esteemed for bringing them up even if my solutions do not carry the day."*

10. Protection of What's Important—*"Administrators protect my instruction and planning time by keeping meetings and paperwork to a minimum. In fact, we don't even have faculty meetings in the usual sense... certainly not just for business and announcements. Those needs get covered by memos and word-of-mouth contact with the principal. When we do meet, it is for curriculum and instruction purposes, often in small groups like the study group on learning styles I was in last spring."*

11. Traditions— *"There is always something special to look forward to as I scan the calendar. Be it a fair, a trip, or a science Olympiad, there are events coming up that students and teachers alike see as refreshing or challenging and a definite change of pace. Some of these traditions are rooted in ceremony, others in activity. They exist both in the curriculum as grade-level projects or activities, and as recurrent events within the life of the school."*

12. Honest, Open Communication— *"I take responsibility for sending my own messages. I can speak to my colleagues and administrators directly and tactfully when I have a concern or a beef without fear of losing their esteem or damaging our relationship. Around here people can disagree and discuss, confront and resolve matters in a constructive manner and still be supportive of each other. And I can listen to criticism as an opportunity for self-improvement without feeling threatened."*

Robert Hinton captures these qualities when describing changing relationships in a Chinese village during the revolution:

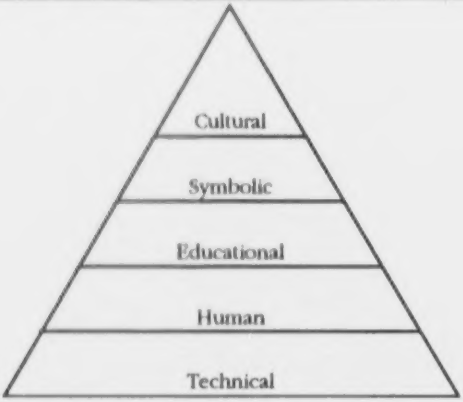
> One had to cultivate the courage to voice sincerely held opinions regardless of the views held by others, while at the same time showing a willingness to listen to others and to change one's own opinion when honestly convinced of error. To bow with the wind, to go along with the crowd was an irresponsible attitude that could never lead to anything but trouble....The reverse of this, to be arrogant and unbending, was just as bad. (Hinton, 1966, p. 395)

This type of communication is supported by several of the cultural norms. Difficult issues and criticism require an inner conviction that one is all right and respected by others. Appreciation and Recognition, Involvement in Decision Making, and Reaching Out to the Knowledge Bases support this kind of mutual respect.

How to Build the Norms of School Culture

Sergiovanni (1984) describes five leadership forces where actions make a difference in building good schools (see Figure 2). Effective leaders have skills with which to apply each force.

Figure 2
Sergiovanni's Leadership Forces That Build Good Schools

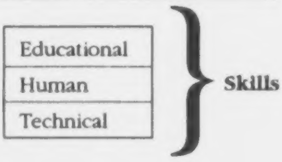


Technical skills pertain to such managerial matters as scheduling and delegating; human skills include listening, group dynamics, and conflict resolution. Educational skills include knowledge about teaching and learning; symbolic skills include knowledge of and commitment to core institutional values and ways of articulating and representing them. And the cultural arena involves building norms such as the 12 discussed here. But if we are to understand what leaders do to build and maintain excellence in schools, the relationship among these five forces and arenas for action needs expansion.

Leaders show their technical, human, and educational skills through activities that call them forth rather directly. A parents' night must be organized (technical and human); difficult meetings chaired (human); and conferences held after classroom observations (human and educational). We offer the proposition that leaders show their symbolic and culture-building skills through those same activities and not in separate activities that are exclusively symbolic or cultural (with exceptions like opening-of-school speeches that are symbolic occasions). From this perspective Sergiovanni's diagram might be redrawn as shown in Figure 3.

Cultures are built through the everyday business of school life. It is the way business is handled that both forms and reflects the culture. Leaders with culture-building on their minds bring an ever-present awareness of these cultural norms to their daily interactions, decisions, and plans, thus shaping the way events take place. Because of this dynamic, culture-building occurs simultaneously and through the way school people use their educational, human, and technical skills in handling daily events or establishing regular practices.

Figure 3
Cultural and Symbolic Skills



For example, suppose there is interest in a revised curriculum planning procedure. What would a culture-builder do in a leadership position? A sure way to prevent the crisis-management of curriculum—where small numbers of parents can successfully pressure a school board, superintendent, or principal to "look into" a curriculum area such as science—is to maintain a planning process that systematically and routinely evaluates and renovates all curriculum areas. Such a system might ask parent-teacher committees to assess the existing curriculum by reviewing literature, consulting experts, and interviewing parents. Having established a curriculum's strengths and weaknesses, the committee could write a statement of philosophy to guide the next phase—the identification of new curriculums, texts, and activities—recognizing that the review process might well validate existing programs.

With the first phase of planning complete, the parents leave the committee and turn the actual development of new curriculum over to the faculty and administration. Over the next several years programs and activities are piloted and implemented, leading back to the evaluation phase in approximately five years. In this way all curriculum areas can be located on the planning cycle. While this approach to curriculum planning can be done by whole school systems, the process is especially powerful when conducted in individual schools.

A planning process such as this is itself an opportunity for infusing the cultural norms into a school. A good place to start is with a leader offering to parents and teachers Lightfoot's (1983) notion of a "consciousness of imperfection," a perspective in which we assume that any school has areas of strength and weakness and that the "good" school is distinguished by its openness to dealing with its imperfections. The school leader could use this opportunity to point out how improvements emerge from a culture that embodies norms such as our 12. She or he can then outline a process that demands experimentation by piloting new curriculum and encourage collegiality by asking teachers to work together on evaluation and design. Central to the planning is a commitment to involve stakeholders in decision making while being clear about the limits of their influence.

After completing the review, the administrator must ensure that teachers receive support to carry out their plans. For example, if a science committee recommends integrating microcomputers into science laboratories, funds need to be budgeted for purchasing equipment and training teachers. While providing support, the principal needs to emphasize the high expectations she or he has for their work. Building specific goals into teachers' formal evaluation—which should take place no less than every three years—is a useful way of making the connection between support and high expectations. Down the road a principal will want to recognize teachers' efforts by reporting to the superintendent and school board and perhaps even attaching rewards for their efforts. Our district distributes $6,000 service awards for recognizing teachers' contributions in a variety of areas.

The culture builders in any school bring an ever-present awareness of the 12 norms to everything they do in the conduct of daily business. It is this awareness and commitment to culture building that is more important than any single activity or structure in the school organization. Once we are clear about what the important norms of a strong culture are, the activities and forms through which we build them are legion.

If we are serious about school improvement and about attracting and retaining talented people to school careers, then our highest priority should be to maintain reward structures that nurture adult growth and sustain the school as an attractive workplace. A strong culture is crucial to making schools attractive workplaces. If the norms we have outlined are strong, the school will not only be attractive, it will be energized and constantly improving.

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Environments Affect Teachers and Students

by Dr. Martin Maehr

Reprinted with permission from *Instructional Leader* (October 1991).

The psychological environment of the school plays a strong role in whether teachers and students are committed and motivated, according to Dr. Martin Maehr.

Maehr, a National Center for School Leadership researcher, has studied Illinois public school students to find how psychological environments of schools affect teachers and students of different ages and ethnicities.

The more teachers perceive that the environment emphasizes accomplishment and recognition, the more committed teachers are to that school, Maehr found.

Teacher satisfaction and commitment were strongly associated with emphases on recognition, accomplishment and affiliation, and a feeling of unity regarding the mission of the school.

Teachers reported less satisfaction when they felt the school emphasized competition and power-based relationships.

Good interpersonal relationships are important, but they are not nearly as important as being recognized for productivity and good work.

The role of the principal is to promote a psychological environment that is associated with satisfaction and commitment, so teachers feel that all of the personal investment, commitment, extra hours and effort are worthwhile.

Dr. Martin L. Maehr joined the faculty of the University of Michigan as professor of education and psychology in 1988. He has conducted research on motivation and achievement in the United States, the Middle East, and Asia. The editor of a research annual, *Advances in Motivation and Achievement,* he has authored several books and numerous articles. He is co-chair of a team of researchers from the University of Illinois and the University of Michigan which was recently awarded a grant by the Department of Education for studying ways of enhancing school leadership to improve student learning. He is now a researcher at the University of Illinois.

Environments Differ

Students, too, are affected by psychological environments of schools.

Schools differ in the learning environments they provide, and can make a difference in motivation and achievement of students.

A study of 16,310 fourth, sixth, eighth and tenth grade students from 820 Illinois schools done with the Illinois State Board of Education, found that:

- One school environment may not fit all equally well.
- Environments had the greatest effects in explaining motivation for tenth grade students in all ethnic groups.
- The relationship between the environment and motivation is stronger for minority students when compared to white students.

Variation in the environments of schools makes a difference in motivation and achievement, and has different effects on different ethnic groups.

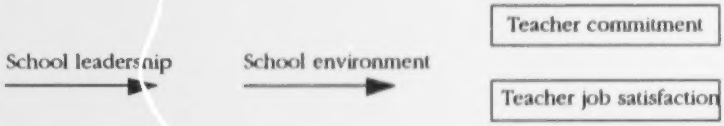
Perceptions Vary

"There is growing recognition that elementary, junior and senior high schools are different organizations with different school (environments) and different leadership needs," Maehr says. "Research on the school as a whole, on its 'culture,' has suggested that schools do indeed differ in the kind of learning environments they provide."

The structure of secondary schools creates a very different organization than that of elementary schools. Principals may emphasize different concerns, and teachers may assume leadership roles at different levels.

Commitment to Schools

Teacher commitment and job satisfaction levels are affected by a school's psychological environment, according to a research report by Martin Maehr



Source: Martin Maehr

Environments Vary

At all grade levels, the more that students perceived that their environment emphasized accomplishment and affiliation, the more they felt committed to the school.

Compared to teachers at other levels, junior high teachers reported greater stress placed on accomplishment and affiliation but less on power.

"Teacher perceptions of the strength of the culture are stronger at the junior high level than at the other levels," according to Maehr.

There was a difference between teacher and student impressions of the school's environment. "Students may feel that the environment supports warm interpersonal relationships while teachers distrust and dislike each other."

Students had various commitment levels to the values of the school. Elementary school students were the most committed and senior high students, the least.

Among all of the different environments, being rewarded for good work and effort is a key in both teacher and student satisfaction and commitment.

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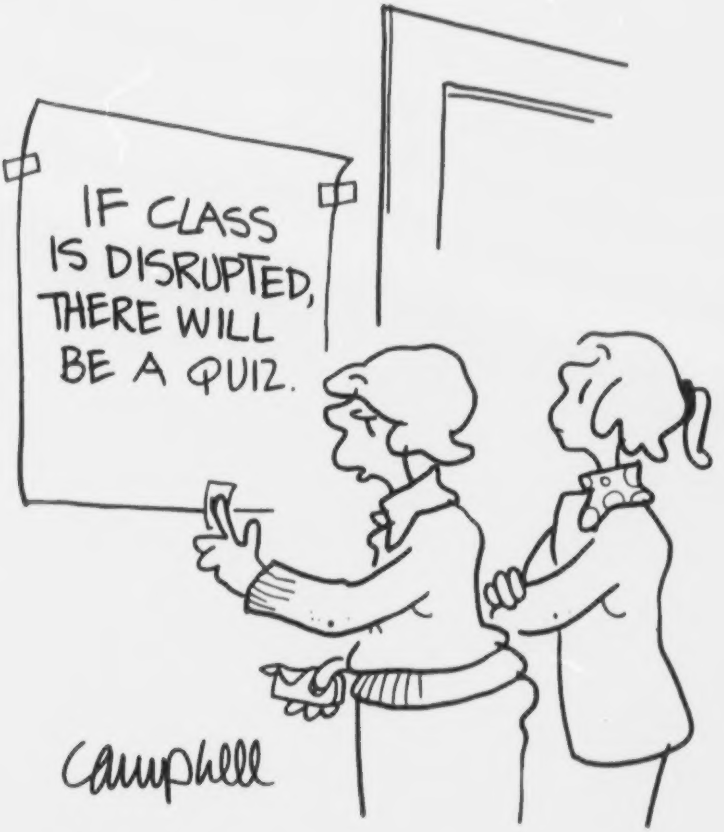

IF CLASS IS DISRUPTED, THERE WILL BE A QUIZ.
Campbell

©Martha Campbell. Used by permission.

"I'd like to overwhelm them with instructional excellence, but I'm not above winning through intimidation."

No More Suspension: Creating a Shared Ethical Culture

by Barbara Ries Wager

Reprinted from *Educational Leadership* 50:4 (December 1992/January 1993). Copyright by ASCD.

■ *An urban elementary school's transformation from chaos to harmony began when the principal and staff replaced their disciplinary policy of temperate "rules and regulations" with "the ten commandments" of behavior.*

> "Madam, we guarantee results—or we return the boy!"
>
> —Rev. Francis Patton, President of Princeton (1888–1902)

While the United States Department of Education sets its sight on unprecedented academic success before the year 2000, educators are floundering in an oil slick of low scholastic performances. Studies of elementary and high schools document a high percentage of illiteracy, inadequacy in math and science, falling SAT scores, and the inability of millions of American students to satisfy minimal employment standards. Sporadically, and as if it were an entirely unrelated issue, we hear outbursts over "violence in our schools."

Every month 130,000 teachers are victimized by robbery or theft, and 5,200 teachers are attacked. Some of the attacks are so vicious as to generate newspaper headlines: a 3rd grader tore several ligaments in his teacher's thumb, a high school student bit off his teacher's ear, a group of students—angered by grades on a test—ganged up on their teacher and set her hair afire.

Barbara Ries Wager is principal, James P. B. Duffy School No. 12, 999 South Avenue, Rochester, NY 14620.

The violence is by no means a one-way process. Generally, however, teacher violence is a response to student violence. Both acts are actually struggles for authority and power.

Where Academic Failure and Violence Meet

It is precisely in the realm of authority and power that academic failure and classroom violence meet. Teaching and learning cannot exist in an uproar, and that uproar need not be a mass phenomenon. One child can paralyze learning for a whole class or even an entire school.

As a young teacher of 4th graders, my own nemesis had been 10-year-old Cody. Cody who turned over desks when classmates were working with paints, Cody who beat rhythms on the desktop all day, Cody who bit the custodian in the buttocks as the man bent over to repair the radiator. Cody performed at center stage from 9 a.m. to 3 p.m. with inappropriate behavior bordering on the bizarre and barbaric.

For any teacher competing for authority and power with a "Cody," the way is seldom clear. Does one ignore or respond? Cajole or punish? Even the elimination of individual "Codys" is no guarantee of permanent peace. As if it were a mischievous Law of Pedagogic Nature, new candidates for the role of class disrupter arise to replace their predecessors.

The Battle Against Barbarism

In my search of the literature for others who—after years in classrooms that too often resembled the savage child-ruled society in Golding's *Lord of the Flies*—had also concluded that the battle to educate and the battle against barbarism were deeply integrated phenomena, I eventually found the most eloquent expression of that integration in the writings of Jacques Barzun. In discussing the abandoned and orphaned children who were discovered after great societal catastrophes, roaming in wild packs, even walking on all fours and grunting like beasts, he said, "The reason teaching has to go on is that children are not born human, they are made so." That formulation was to be permanently emblazoned on my private banner as a teacher and, 20 years after I had begun my educational journey, as a principal.

For the record, neither Jacques Barzun nor I literally mean that educators bear the entire burden of the "humanization" of the young. In all societies, the process of teaching the young is undertaken by a group of interlocking systems and institutions. Children are instructed in the virtues and vices praised and condemned by their societies, and these ideas and values are further enforced by an organized system of rewards and penalties. While a "culture" encompasses vastly more, this is the minimum glue that holds a social fabric together and that creates "humans" in a society's desired image.

The challenge of such acculturation is complex in the pluralistic United States. Members of our society vary dramatically in professional and economic status, familial compositions and education, religion, race, ethnic background, language, and, frequently, value systems. For the professional educator, the primary challenge is to create a minimum shared value system and ethical culture that can permit the educational process to function.

The magnitude of that challenge varies enormously with the size and heterogeneity of a student population. The most complex problem is to be found in the completely mixed demographic situation. Here the educator—facing American pluralism in all its socioeconomic variety—must attempt to unify the almost ununifiable. That is the situation I faced.

Chaos Control

In 1985, I was named principal of James P.B. Duffy School No. 12, an elementary school in Rochester, New York. Five years later, I was honored by local, state, and federal institutions, agencies, and professional groups, and I was one of those recognized at the White House for creating a model American school.

James P.B. Duffy School No. 12 is the epitome of a "mixed" demographic population. The students, who number more that 950—far more than the population of many American towns—come from every corner of a complex industrialized city and emerge from the usual subcultures. Between 65 and 70 percent are minorities, and 68 percent of our students fall below the poverty level. A significant group—25 percent of our classes—are emotionally disturbed and learning disabled. Half of the population arrives in buses.

School No. 12's academic problems embodied the universal list of scholastic calamities Americans read about in the press. Performance in reading, written composition, and math were mediocre at best. Students were devastated by even the most minimal challenges in science. As for "social studies," few could identify the city or state in which they lived, none could name any other than the current President, nor could they explain the significance of any national holiday. Reference skills were nonexistent: students were unable to differentiate among a dictionary, an encyclopedia, and an atlas. A high percentage of students were repeating grades or had to be passed on despite their ineptitude because by state regulation they were too old to "repeat."

Violence, too, punctuated the school day. Older children occasionally terrorized younger ones, sometimes extorting money from them. There were daily outbreaks of fist-fighting. Students conspired with older brothers to bring bicycles to school at dismissal time so that they could run down supervising adults. Ethnic and racial groups locked horns at every opportunity. Emotionally handicapped students were constant anarchy: they threw food, overturned furniture, and ran wildly through the building tearing displays off the walls and knocking down people during their rampages.

In the face of these outbreaks, teachers reacted in different ways. Some, who had frozen into passivity, did nothing to control the problems and neglected any available preventive measures. Others became petty tyrants, harassing children with abusive lectures or insisting on formal public apologies following misdemeanors. Some teachers expressed their anger in physical forms: one teacher tipped over the desks of 2nd graders if their contents were not organized in a prescribed way; another assigned, as punishment for misconduct, the performance of 100 push-ups. Some fought violence with violence: One teacher threw a pail of water over squabbling nine-year-olds as if they were fighting dogs. While there were no instances of outright battery by teachers, neglect and retaliatory actions were sufficient to keep the faculty in a state of chronic agitation and to breed angry gossip about peers.

Suspension of the Suspension Policy

In this disastrous situation, what solutions were invoked? Essentially the same two that were invoked when I was a student teacher more than 25 years earlier: (1) temporary extraction of the misbehaving student from the classroom by the principal for a few hours, and (2) suspension of the student from the school for one to five days.

In my first year as principal, I had suspended students 106 times. Had I acceded to all teacher requests, it would have been 300. A quarter of a century had passed; the world had been scientifically, technologically, culturally, and geopolitically revolutionized—but not one new idea had emerged in the world of education to deal with the disruptive "Codys." As I analyzed the problems in the 950-citizen "town" of which I had become mayor and police chief—with delusions of being an educator—I realized that it had verged on the miraculous that anyone, including the most diligent students, had learned anything at all.

Long before I had an alternative to propose, it was clear that suspension did not work. The fact was that teachers defensively rationalized a system that no longer worked. Crippled by the apparently unsolvable problem, they relied on suspension like a crutch. But, in the course of observing our dependency on the failed "solution," I reached one conclusion: neither they nor I would be free to think creatively about a new strategy unless the pseudo-solution were abandoned. So, one year after my principalship began, I informed the staff that I would no longer suspend students and demanded that they propose alternative modes of discipline.

This act of apparent psychological brutality worked. For almost two intensely disagreeable months, the majority of teachers responded with everything from sullen silence and secretive gossip to overt grumbling and hostility. I was sustained, however, by the knowledge that a minority understood. A sturdy nucleus of allies, willing to engage in fresh thinking, emerged.

The Rescue Operation

A progression of committee meetings ensued over several months. Needless to say, "group thought" is disorderly, but from the confusion three themes emerged. The first might be called the "rescue operation." If children were not to be expelled from the classroom unless dangerous to themselves or others, we had to rescue teachers from classroom disruption and from their own confrontational behavior. Our goal was to provide all teachers with the wisdom and self-restraint that had characterized the very best teachers all along, and our strategy was a support group.

The Climate Committee was composed of 8–10 teacher volunteers, at least one administrator, and a few parents who could be called on short notice. The group's first duty was to serve as an informal "court" where conflicts could be resolved rationally outside of the classroom. In cases brought before the committee, neither the teacher nor the student was automatically assumed to be right or wrong. The committee, after listening to both sides, decided on the consequences. More often than not, the student was found culpable, but it was not unheard of for a teacher to be told in carefully couched language that the incident might have been handled in a better way.

The results were so reassuring that the Climate Committee soon became a standard feature of school life. The degree of enthusiasm of its members is best captured by the fact that they were ready to meet before or after school at a moment's notice or, if necessary, to move en masse to a student's home.

Our Ten Commandments

Second, we sought to escape the confusion that invariably occurs when directives are left to individual interpretation. We outlined our new procedures in writing and issued them to all staff members. Curiously, although there was little question in any teacher's mind about the types of misconduct that make teaching nightmarish, it was extraordinarily difficult to express rules in a simple, coherent fashion. We wrote, amended, and rewrote the rules over a period of three years, and only recently have we been satisfied with them.

The reason for the difficulty lay in a taboo against "authoritarianism," which had been pounded into the heads of a generation of teachers. We had all been taught that it was an act of tyranny to say "thou shall not." Good pedagogy required "positive" expressions. Since it is impossible to say "Don't fight," "Don't swear," or "Don't bring weapons to school" in a positive fashion, we continually ended up with lists of soothing bromides about good fellowship, which no one took seriously.

The day came when I abandoned this absurdity and unilaterally rewrote the code of conduct. I perused our original statement of "rights and responsibilities," crumpled it up, and typed out a set of "ten commandments" that explicitly told children what they must not do. "At last!" pronounced the entire staff. We had finally summoned the courage to overthrow the rule of soothing bromides we had been taught to revere. I had abandoned my role as police chief and sheriff. I had become Moses. Here are School 12's Ten Commandments:

1. No weapons—real or toy (first offense to committee).
2. No pushing, tripping, hitting, or fighting.

3. No swearing.
4. No threatening.
5. No insulting others.
6. Stay where adults are in charge.
7. No class disruption or refusal to follow adult direction.
8. Respect things that belong to others (no stealing, extorting, destroying).
9. Do not touch fire alarms; do not bring matches.
10. No alcoholic beverages, drugs, or cigarettes.

It had taken 70 adult American educators three years to develop the nerve to say "No!" The heavens did not split asunder.

On the basis of these school rules, we worked out procedures for the staff.

1. At the first infraction, the teacher counsels the student and informs a parent.
2. On the second infraction, the teachers hand delivers (to me) a referral to the Climate Committee.
3. A date is set usually within 24 hours for parent, child, and teacher to appear at a hearing.

After a handful of experiences, the staff realized that the hearing system could actually be imposed on students and, above, all, on their parents. It had not required armed guards or the police. It had only required strong moral purpose, dedication to education itself—and a single warning. Should a parent resist attendance at a hearing, he or she was to be told "Your child will not return to the classroom until you participate."

We had all underestimated the desire of parents for the education of their children and their understanding that this could only be achieved within a simple moral framework. It was not only middle-class parents who responded; even those parents who were assumed to be unreachable—the "uncaring mothers," "the father on drugs"—pulled themselves together and showed up. The power of our "ten commandments" was profound. We had tapped into the root system of traditional American values.

By the same token, our system of punishments was remarkably efficacious. Since this was an elementary school, and infractions were seldom criminal matters, our punishments consisted of reparations. A child who ripped up a stack of class compositions had the task of reproducing every one. Two children who fought in the lunchroom were afforded the pleasure of each other's company for a month of lunches in a private, supervised place. After all the girding of loins, the great moral revolution at School 12 was anticlimactic. Its purposes and values had been built into almost every home in the land. It was only the educators, guided by several generations of educational theorists, who had not known it.

A System of Rewards

The third measure we took was, from our perspective, the most radical. It dawned on one teacher that a system of rewards could reinforce a system of prohibitions and punishments. We all agreed. Our reward system, too, was simple:

1. Once a week, exemplary conduct wins a reward from the teacher in every classroom—for example, watching a short movie on Friday afternoon.

2. Three sequential weeks of good behavior are rewarded with an enjoyable schoolwide activity such as a full-length movie with popcorn.

3. Any child receiving an A in citizenship (good conduct) on a report card is awarded a Good Citizen Badge, which brings with it special privileges. (Holding on to one's badge was deemed so desirable that some good citizens were guilty of unpinning theirs during lunchtime so that they could revel in a few rowdy moments.)

4. The child who receives an A in citizenship on four successive report cards attends a Good Citizens' Banquet in June, where children are treated to a spaghetti dinner with brownies for dessert—served to them ceremoniously by the staff.

With the institution of this system of rewards, a fever of good conduct broke out in our school. This happy result came as a surprise to most staff. In fact, many had felt it was improperly competitive and violated the principle of equality by ranking some children as better citizens than others. We were unprepared for the notion that strong incentive combined with strong disincentives could dramatically influence children's behavior and win the ardent cooperation of parents.

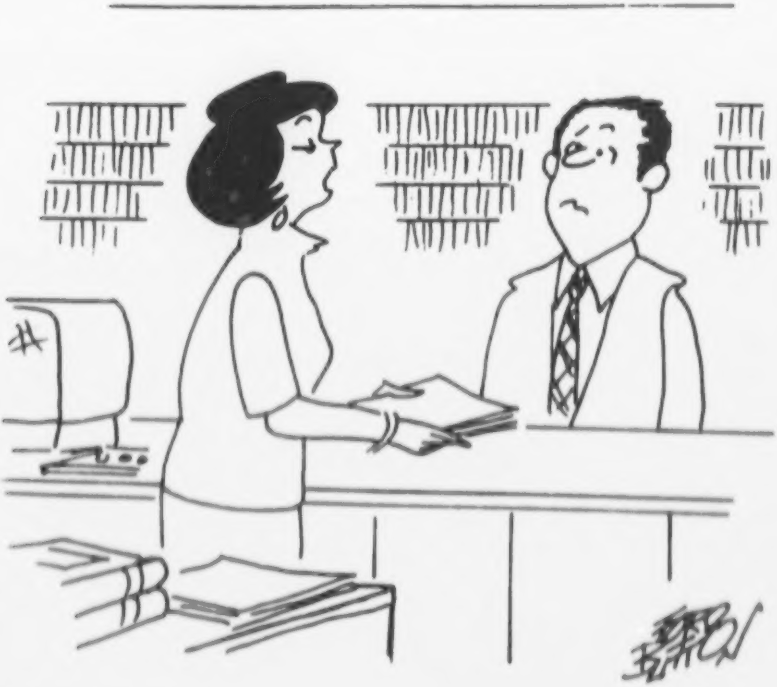
A Blue-Ribbon School

Teachers changed. Passivity and bitterness were replaced by enthusiastic participation. Even in this large urban setting, we were able to individualize our responses to behavior problems. Students changed: They wished to be "good citizens," they wished to avoid hearings for misbehavior, they were eager for rewards, and they acquired a greater capacity for self-discipline. Parents changed as well. Before we had an ethical culture in the school, many parents couldn't be reached by phone and refused to come to school. Some berated teachers and administrators and rationalized the misbehavior of their children. After a system of shared ethics culture was created, most parents participated gladly in reinforcing it.

Eventually, the disciplinary problems that had so tormented us shriveled to a negligible size. There are only occasional breaches of conduct—on an average, fewer than one disciplinary hearing a week and a few suspensions a year. As a result, the quality of teaching and academic performance has risen. In 1989–90, state test results were the best they had ever been: between 94 and 99 percent of children performed above the state reference point in reading, math, and written composition. Staff now spend more time on reform and renewal. Administrators are free to do the more fruitful work of planning, communicating, and coordinating. Finally, we have been named a "Blue Ribbon School."

I am asked incessantly, "How did you do it?" The truth is that we at School 12 faced the fact that we had forgotten what our forbearers of 50 years ago knew so well: that one of our most crucial missions is the civilizing process itself, that this historic professional mission had been eliminated from our intellectual repertoire, and that we had to reinvent the wheel.

Educators must understand that the solutions to their problems will not be found in sources external to themselves but, rather, inside their own heads. That is where we, at School 12, found the answers—and so can they. ◀



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"*You'll find* Classroom Disipline in Three Easy Lessons *in fiction*."

Monitoring

Fairfax Report Cards Yield to 'Portfolios'

by Maria Koklanaris

Reprinted with permission from *The Washington Times* (November 5, 1991).

When Patrick and Nalini DeCorla-Souza visited their son's Fairfax County school for parent-teacher conferences yesterday, they received his report card—just like they have at the end of the first quarter of every year nine-year-old Kevin has been in school.

But this year, instead of just a science grade, they saw the carefully illustrated butterfly book he kept as he watched a caterpillar undergo its beautiful transformation. And instead of just a reading grade, they heard him read aloud on a tape he made for them. Then they inspected his reading log, which shows that he has already finished four novels on his own in school this year.

These materials and others are part of Kevin's portfolio, a relatively new educational concept that has become mainstream in Fairfax this year. The idea borrows heavily from the business world, where more and more employers want to see work samples as well as a resume.

"You're gaining a life skill now," Cindy Forrer, Kevin's teacher, told her fourth-grade class at Franconia's Rose Hill Elementary as they worked on portfolios last week. Parents began seeing their children's portfolios in conferences yesterday.

Children at all levels, but particularly in elementary schools, are compiling portfolios that show parents and teachers what and how much they are learning in each subject. Teachers are using them as an assessment tool, just like they use grades and standardized tests. However, the use of portfolios is voluntary.

A "portfolio complements the final grade on the report card, but it shows parents, teachers and students how the grade was reached," Mrs. Forrer said. "We're really moving toward using something that shows the growth process."

Ann McCallum, the school system's coordinator for elementary language arts, said teachers and students have a great deal of flexibility in what should go into a portfolio. She said portfolios are the property of students, who are asked to show them to their next teacher. Then that teacher has a clear idea about what the student worked on the year before.

Along with each item in the portfolio is a comment from the student and a comment from the teacher explaining why the item was picked, what is good about it and what could be better. Ms. McCallum said she often thinks about the comment one girl wrote about her first poem, which she included in her portfolio.

"It said, 'This may not look like much to you, but I've never worked so hard on anything,'" Ms. McCallum said.

Fairfax teachers first learned about portfolios three years ago, when Ohio State University professor Robert J. Tierney spoke at a conference here. Mr. Tierney is author of the recently published "Portfolio Assessment in the Reading/Writing Classroom," the only book on portfolios in public education.

"I got frustrated with people who were coming up with new [educational] tests that didn't seem to be much better than the old standards," Mr. Tierney said in a telephone interview.

A portfolio, he said, may be "less objective" than a standardized test, but "it's also more valid. It gives you a true sense of what the child can do—the direction in which he might move."

Parents seem to agree.

"I think it's very encouraging for children, because they can see their progress," as their portfolios develop, Mrs. DeCorla-Souza said after looking through Kevin's portfolio.

She also said she appreciated the chance to see concrete examples of the various things her son does in school and how he feels about them.

"That's what education is about, anyway—total development," she said.

Kevin was a bit more direct.

"They're OK," he said about the portfolios. "Because people can see how good you are." ◀

Quest for Quality

by Richard B. Wilson and Mike Schmoker

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What can a major automobile manufacturer teach you about site-based management? More than you might think. Site-based management might be the right thing to do, but to be successful, it has to be done right. And we believe Toyota of America can give schools an inspiring vision of effective management. In fact, we're applying the management lessons we've learned from Toyota in the Amphitheater Public Schools in Tucson, Arizona.

We'd like to tell you our story. But first, we want to emphasize: We have no ties to Toyota. We chose to visit the plant because we were interested in how Japanese management might apply to our schools. Our praise—based on three days of observations at the Toyota of America plant in Georgetown, Kentucky, north of Lexington—grows out of hours of discussions with workers and managers both at and away from the plant. We've seen first-hand the company's ability to empower its employees. And we've decided the approach is worth applying thoughtfully to our 13,000-student, K–12 school district.

Our examination of Toyota began with a question: What is it about Japanese management that is able to build loyalty to the organization at the same time that it gives extraordinary autonomy to employees? With an overwhelmingly (98 percent) American work force, Toyota of American demonstrates how the Japanese have met the real challenge of management: maintaining high morale as well as a heart for continuous improvement. They've done this by breaking ranks with the old-style industrial model, with its soul-killing treatment of workers as unthinking cogs who respond to the directives of a managing elite. Instead, Toyota has recognized a new kind of *thinking*

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employee—the kind of worker who makes employee-based innovation possible. Learning this secret to success, we think, is essential for schools under site-based management.

Toyota is, according to industry leaders such as J.D. Power and Associates, the best automobile manufacturer in America. The company attributes this achievement to its "3,500 secrets of success"—that is, the contributions of the heads and hands of each of its 3,500 employees. Toyota makes every employee his or her own manager, his or her own quality-control expert. Not surprisingly, Toyota employees, in turn, express an exceptional level of loyalty and satisfaction. And the company, as *Fortune* magazine put it recently, keeps getting better. You can see the excitement and enthusiasm in workers on the line and in managers interacting with employees.

This relentless energizing, *measurable* approach to improvement, we decided, is worth careful study.

Working the Numbers

The way Toyota measures—the way it "works the numbers"—is perhaps its most helpful lesson for school leaders, trapped as we generally are between demands for better standardized test scores and a simultaneous push for "authentic assessment." As John Allen, a Toyota executive, says, measurement makes "every employee a quality-control expert."

Allen points out that Toyota's methods are a refinement of the work of W. Edwards Deming, the American management expert who guided the Japanese toward their post-World War II industrial success. Deming's theories about the importance of statistical controls in promoting quality and improvement are the backbone of Toyota's—and other Japanese companies'—success. This understanding is at the heart of every strategy the company employs. "Give me the data" is the expression you hear in every important discussion and evaluation at Toyota. And this aspect of management is—despite all our talk about improvement—what we school leaders most often overlook.

The intelligent use of statistical controls is not the same as "production quotas" or cold, coercive, two-year plans. Though once the mark of industry, quotas do little to motivate workers and do still less for morale. In education, the outsize influence of production quotas can be seen in the impact test scores have—when, by our district's reckoning, only about 20 percent of what we regard as most valuable to our students is measured by standardized tests.

In the Amphitheater schools, we've learned from Toyota that when we talk about school "outcomes," it's essential to recognize the distinctions among test scores and various other indicators of success. Indeed, we need to fine-tune our understanding of the word "outcomes." The term currently smacks of year-end, standardized test scores—an emphasis that, let's face it, has done as little to improve schools as production quotas have to improve industry.

We do need to track some broad benchmarks of success—including dropout rates, for example, and percentages of students who go on to college—to measure how our schools are doing. But even these indicators are measured too infrequently and are too remote from the daily and weekly instructional realities that must be our focus if we hope to energize teachers and improve what we do.

What schools and teachers need is something akin to Toyota's numerous, changing, even ad-hoc goals and targets. And these goals and targets must represent what is most meaningful and motivating to those closest to the job. Toyota calls these goals "quality indicators." In many cases, they're *employee-determined* targets and benchmarks. As Toyota believes, it's not leadership's role to set these down. Rather, it's the school leader's role to ensure consistency between teacher-determined goals and targets and the school district's overarching goal.

As for the involvement of employees in measurement, individuals, small teams, and larger groups routinely are gathering data and checking and reporting on progress as measured against daily, weekly, and monthly objectives. All management does is make sure the numbers, percentages, and goals are routinely discussed and disseminated—with the assumption that improvement is always possible and the organization has nowhere to go but up.

In this way, numbers don't alienate. They make palpable what even conscientious employees might otherwise overlook: the precise degree to which a strategy is succeeding or failing, the real measure of a method's effectiveness, or a method's consistency with the organization's goals. Being measurement-minded in this way fosters precise and ongoing reflection—but always with a specific and concrete point of reference.

How readily does this concept transfer from industry to schools? In fact, this approach is both humane and hard-headed in dealing with demands for improvement and accountability. For example, schools or grade levels can decide on goals for the number or percentage of students who can write an effective persuasive essay—or who can aptly apply mathematical concepts by the end of a quarter, semester, or year. Schools can establish targets for the proportion of at-risk students who demonstrate progress, or for the percentage of students who successfully complete such courses as algebra or geometry. These are only representative examples; the possibilities are endless, with room for refinement at every stage.

This targeted approach provides a specific means of evaluating grades, instructional teams, and schools. And when you measure specifics, you also open the doors to instructionally substantive dialogue—giving employees something immediate and concrete to talk about, at and between every level, at any given time.

Making Assessment Authentic

Toyota's John Allen views this self-scrutiny–this obsession with small, incremental improvement—as a function of frequent discussion and constant reference to "the data." This use of statistical controls makes improvement almost inevitable, because careful measurement is precisely related to the quality of work accomplished. At Toyota, this statistical approach cultivates a spirit of improvement—not to mention dignity and other human dividends of a self-managing work force.

In schools, we believe, it can do the same thing. Of course, such ad-hoc, team-invented "outcomes" won't wind up in state reports or district comparisons. But the standardized test scores used in district and statewide comparisons are to schools as sales figures are to Toyota: significant, but hardly the sole statistic on which to base strategy. If teachers' self-evaluations don't align with established district goals, management steps in. It's the manager's task, at this stage, to conduct careful analysis of teaching practice—at the same time considering whether the evaluation instrument is a legitimate measure of success.

We're convinced this approach makes the role and function of management more viable, not less so. And it does it without requiring supervisors to be all-knowing instructional experts—which is too much to expect of anyone. This kind of management depends on all participants—teachers and managers—doing the work of assessment and evaluation. (In fact, at Toyota, some employees serve in a quasi-supervisory role, acting as liaisons and interpreters to make the data intelligible to management.)

Getting everyone involved in assessment and evaluation is an effective way of dealing with the problem of having too little time. After all, effective evaluation takes time. Most school administrators just don't have enough of it to do a good job of evaluating a large number of staff members. When you get individuals, teams, and groups involved in evaluation, you not only empower employees, but you also make the evaluation more meaningful. The evaluation data can include such specific measures of progress as the percentage of students writing at a satisfactory level, or mastering crucial grade-level mathematical operations, or completing a unit project that illustrates the students' grasp of a period in history.

With this approach to measurement, assessment, and evaluation, the task of managing becomes visible—people *see* what managers do. Management becomes less aimless and far more efficient. At Toyota, we watched managers tackle difficulties in brief, problem-centered exchanges with employees—always basing their discussions on specific data. In schools, this approach would enable teachers and managers to discuss the wide gamut of school concerns, using a common language and specific, problem-centered data.

Talking about Problems

This brings us to the next benefit of applying Toyota's system of participative management to schools. If statistical controls are the heart of the Toyota approach, then meetings are its lifeblood. And employees cherish those opportunities to talk: to discuss problems, air legitimate grievances, review progress on previously discussed problems, and assign responsibility for solving new ones.

In innumerable ad-hoc get-togethers, small-group confabs, and large-scale meetings, Toyota employees discuss goals and targets. Everyone participates, and it's everyone's job to keep the meetings as productive as possible by insisting on good evidence in every discussion and by acting as a gatekeeper for anything that doesn't have a direct impact on matters of highest priority. The time is valued because it is "down time"—time when actual production is not getting done.

It's not difficult to see the difference between this problem-centered approach and the procedural, less substantive style that prevails in many school meetings. As school leaders, it's essential that we intervene to make meetings more meaningful—especially as site-based governance councils get started in the name of school-based management. We need to help teachers, parents, everyone talk about specific and vital concerns.

This new kind of conversation has to tackle real problems head-on. Knowing you can't fight what you can't see, Toyota turns on its head the traditional way companies deal with problems. That is, Toyota chooses to emphasize problems, rather than avoid them.

Employees speak of problems as opportunities, as ways of advancing the interests of the team and the organization. They seem to enjoy finding problems. But because they do this collectively, in the context of regular meetings, the threat to individuals is kept minimal. More minds can ponder the possible solutions, and everyone can enjoy the triumphs. Problem solving becomes a source of personal satisfaction and security.

It's surprising–and inspiring—to see employees talk excitedly about team goals and, as one employee put it, to "hit the ground running on Monday mornings." Such a work ethic strains credulity. But the fact is, Toyota employees pursue the goals they've set with great commitment, and everyone understands that each offering contributes to overall success. As one executive put it, employees realize that "small victories on innumerable fronts" don't mean just better cars, but better pay and enhanced job security for everyone.

Everyone—including the company president, Fujio Cho—is involved in these problem-oriented discussions. Indeed, Cho is an intriguing example of leadership: His role is to learn by listening—not to employees' excuses for problems, but to their thoughtful remarks, which are always laced with data and concrete reference to problems and possibilities. He spends the first four hours of each day going from one work station to the next, asking about the problems employees currently are dealing with—but never criticizing individuals or groups. Employees remark on how little he speaks, how much he listens, how he does more asking than telling. But this doesn't make him any less effective in communicating the message that improvement is of the essence. And employees know he'll be back to check on progress.

A Can-Do Attitude

This approach stands, we believe, in sharp contrast to traditional school management. Instead of meeting to discuss short-term goals, specific problems, and concrete successes, school leaders tend to have year-end discussions of the often mysterious and remote data from standardized test scores. This ritual does little to arouse passions or inspire commitment.

We need to analyze school, grade, department, and subject-specific data—data that relate directly and discernibly to the sweat and effort made in the classroom. In such a crucible, people *want* to think; they want to examine the area in which they're experts. In this climate, people believe that every problem can be solved—and they're confident once you've solved one problem, you can find (and solve) another. Everything can always be done a little better, a little more efficiently.

At Toyota, too, individuals, teams, and groups recognize and reward every triumph, regardless of how small. Employees are rewarded for every small but meaningful measure taken to improve the process or product: In one case, each member of one group received $25 for inventing a more reliable hook—based on one used in horse stables around Lexington—to transfer car hoods from one station to the next. Another individual netted $5,000 for a simple but budget-wise suggestion: that washers and dryers be purchased and operated on-site to launder the thousands of white cotton gloves used each day.

These contributions–which Toyota calls *katzens* (or small improvement)—vividly symbolize what matters most in the company: the always-thinking, always-contributing employee. This concept instills a sense that the organization's success rests on hundreds of individual and team successes. Toyota never takes this for granted. And neither should we in schools.

One more lesson to learn for school management: No one at Toyota ever stops learning. Everyone wants to become more expert in what they do. So, everyone is involved in training—both teaching and being taught, at work stations and in classes on everything from tact to time-saving strategies. Management and employees are always learning from each other—including the company president. Significantly, Cho's desk is lost in the middle of a vast, nondescript expanse of other desks, and employees are encouraged to visit him whenever they think it necessary.

Moving Hearts and Hands

We're impressed with what we saw at Toyota. The company's approach to management has prompted us in the Amphitheater schools to consider some changes as well as to enhance some existing efforts.

We see that communication is the key to intelligent target-setting. Beginning this year, we're providing half-day early dismissal at each school every week. We hope this freed-up time will evolve into goal-oriented discussions, training, and staff development for everyone. It also will give principals and district-level managers regular and convenient times to generate and discuss data, think, and develop strategy together.

To promote a common concern for district priorities, we plan to hold free and open conversations in schools about the district's most important emphases. We intend to write up and publish the outcomes of these meetings to make our goals clear and intelligible and galvanize us to achieve our common mission. We've started a series of "town hall" meetings to get schools and the community working together on what we regard as most important for our students. We also will publish a monthly research letter that will provide rationales and delineate results as we work toward our goals.

In the spirit of the *kaizen*, we're considering ways of beefing up our innovation grants program. And we're thinking about a suggestion-box system that initially would emphasize ways to be more cost and system-efficient.

It's our second official year of site-based management in the district, so we are re-emphasizing the importance of establishing specific, school-based indicators that allow us to measure our progress. We're experimenting with assessment systems that will allow students to demonstrate what they're learning. Our intention is to move beyond the exclusive use of norm-referenced tests, which have been our sole source of evaluation.

These fledgling measures reflect our belief that success—in schools, as at Toyota—lies in a ceaseless effort to move individual hearts as well as hands. Toyota has pointed us toward a new relationship between managers and employees, where self-assessment and team evaluation are more frequent, more meaningful, and more precise than ever before. And we firmly believe these new procedures hold tremendous promise for the future. ◀

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"Hey, it's just a report on my progress, not an indictment of my upbringing."

Project Spectrum: An Innovative Assessment Alternative

by Mara Krechevsky

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■ *By evaluating young children's strengths in many domains, not just language and logic, the Spectrum battery promises to give all children a chance to shine.*

It's free choice time in the afternoon four-year-olds' classroom at the Eliot-Pearson Children's School in Medford, Massachusetts. The class is participating in Project Spectrum, an innovative approach to assessment in early childhood. Hallie, not quite four years of age, is once again roaming from activity to activity, finding it difficult to concentrate on a task for longer than five minutes at a time. Her ever-patient teacher first tries engaging her in the art table project, then in experimenting with the siphons at the water table, and finally in playing hospital at the dramatic play area, all to little avail. Hallie is easily distracted; she becomes sillier as the hour wears on, making increasingly poor eye contact with the teacher and speaking in nonsense words.

With 20 minutes left until group time, Hallie's turn comes up for the week's Spectrum activity; the assembly task. This task involves taking apart and reassembling two food grinders. Successful completion of the activity depends on a combination of fine motor skills with visual-spatial and problem-solving abilities. Hallie's eyes light up expectantly upon seeing the first grinder, and she immediately touches the main fastener, which loosens the handle and inner mechanism. Within minutes, the grinder is completely

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disassembled, and Hallie begins to put the pieces back together, carefully figuring out the correct direction in which to turn each screw. She adopts a trial-and-error approach, her feet swinging excitedly up and down from her chair whenever she succeeds. She remains focused, persistent, and methodical throughout—correcting her own mistakes, oblivious to the rest of the class.

This anecdote illustrates the power of the Spectrum approach to assessment. Spectrum began in 1984 at Harvard and Tufts Universities as an attempt to reconceptualize the traditional linguistic and logical/mathematical bases of intelligence. Our first four years of research centered on identifying young children's distinctive cognitive and stylistic profiles. In addition to assessing linguistic and mathematical abilities, the Spectrum assessment battery examines mechanical, spatial, bodily, musical, social, and scientific abilities as well (see Figure 1 on page 318). In a political climate that places increasing pressure on educators to extend formal instruction downward and embrace a narrow view of scholastic readiness. Spectrum offers a developmentally appropriate alternative based on a broad view of the mind.

A Rich Classroom Environment

The theoretical foundation of the project stems from Howard Gardner's (1983) theory of multiple intelligences and David Feldman's (1980) theory of development in non-universal domains. Although many early childhood educators still think in terms of children's progressing through broad, undifferentiated stages of universal development, Spectrum was designed to recognize variation in both children and areas of activity. Thus, the Spectrum model identifies domain-specific strengths in areas often not included in many Piagetian or neo-Piagetian approaches to education. Spectrum is based on the assumption that every child has the potential to develop strength in one or several content areas and that it is the responsibility of the educational system to discover and nurture these proclivities. Rather than building around a test, the Spectrum approach is centered on a wide range of rich activities; assessment comes about as part-and-parcel of the child's involvement over time in these activities.

As Figure 1 indicates, the Spectrum measures range from relatively structured and targeted tasks (for example, in the number and music domains) to less structured measures and observations (for example, in the science and social domains). These measures form one part of a rich classroom environment that is equipped with engaging materials, games, puzzles, and learning areas. The learning areas enable children to make initial explorations of materials related to the domains assessed by Spectrum, as well as offering follow-up activities. For example, after the storytelling task, children can be asked to create their own storyboards at the art area. The assessment activities are administered throughout the school year. Documentation takes a variety of forms, from score sheets and observation checklists to portfolios and tape recordings.

Figure 1

Areas of Cognitive Ability Examined in Project Spectrum

Numbers

Dinosaur Game: Measures a child's understanding of number concepts, counting skills, ability to adhere to rules, and use of strategy.

Bus Game: Assesses a child's ability to create a useful notation system, perform mental calculations, and organize number information for one or more variables.

Science

Assembly Activity: Measures a child's mechanical ability. Successful completion of the activity depends on fine motor skills and visual-spatial, observational, and problem-solving abilities.

Treasure Hunt Game: Assesses a child's ability to make logical inferences. The child is asked to organize information to discover the rule governing the placement of various treasures.

Water Activity: Assesses a child's ability to generate hypotheses based on his or her observations and to conduct simple experiments.

Discovery Area: Includes year-round activities that elicit a child's observations, appreciation, and understanding of natural phenomena.

Music

Music Production Activity: Measures a child's ability to maintain accurate pitch and rhythm while singing and his or her ability to recall a song's musical properties.

Music Perception Activity: Assesses a child's ability to discriminate pitch. The activity consists of song recognition, error recognition, and pitch discrimination.

Language

Storyboard Activity: Measures a range of language skills including complexity of vocabulary and sentence structure, use of connectors, use of descriptive language and dialogue, and ability to pursue a storyline.

Reporting Activity: Assesses a child's ability to describe an event he or she has experienced with regard to the following criteria: ability to report content accurately, level of detail, sentence structure, and vocabulary.

Visual Arts

Art Portfolios: The contents of a child's art portfolio are reviewed twice a year and assessed on criteria that include use of lines and shapes, color, space, detail, and representation and design. Children also participate in three structured drawing activities. The drawings are assessed on criteria similar to those used in the portfolio assessment.

Movement

Creative Movement: The ongoing movement curriculum focuses on children's abilities in five areas of dance and creative movement: sensitivity to rhythm, expressiveness, body control, generation of movement ideas, and responsiveness to music.

Athletic Movement: An obstacle course focuses on the types of skills found in many different sports such as coordination, timing, balance, and power.

Social

Classroom Model Activity: Assesses a child's ability to observe and analyze social events and experiences in his or her classroom.

Peer Interaction Checklist: A behavioral checklist is used to assess the behaviors in which children engage when interacting with peers. Different patterns of behavior yield distinctive social roles such as facilitator and leader.

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A Look at Spectrum's Facets

Distinctive features of the Spectrum assessment system include:

1. **Blurring the line between curriculum and assessment.** By gathering information over time in the child's own environment, Spectrum effectively blurs the traditional division between curriculum and assessment. For example, teachers collect children's artwork in portfolios and observe bodily-kinesthetic abilities through a biweekly creative movement session. The traditional test setting of a small room with an unfamiliar examiner administering timed and standardized instruments, in the Spectrum view, provides too narrow and skewed a view of the child. In the Spectrum tasks, children's skills are integrated, rather than isolated. Thus, as we saw earlier, the assembly activity engages Hallie in an applied and meaningful task presented as part of her preschool curriculum.

2. **Embedding assessment in meaningful, real-world activities.** Rather than just focusing on skills useful in the school context, Spectrum uses the concept of adult *endstates* to focus its assessments on abilities relevant to achieving significant and rewarding adult roles. Examples of endstates include *naturalist, salesperson, singer, dancer,* and *social worker.* Thus, in the language domain, Spectrum examines a child's ability to tell stories or provide a descriptive account of an experience—valuable skills for novelists and journalists—rather than his or her ability to repeat a series of sentences. For Hallie, the applicable endstate is *mechanic.* In contrast to many standardized assessments, which might have Hallie copy shapes or block patterns, Spectrum provides her with a real machine to work on. This grounding of assessments in real-world activities ensures that the areas addressed are likely to be meaningful to the child, the teacher, and the child's family.

3. **Using measures that are "intelligence-fair."** Rather than viewing all abilities through the window of language and logic, as most standardized tests do, Spectrum attempts to tap abilities directly, via their own particular medium. In the above anecdote, Hallie works directly with simple mechanical objects, rather than answering questions about how machines work. The music perception and production tasks of the assessment employ Montessori bells and simple songs, while the movement activities elicit both athletic and creative movement.

4. **Emphasizing children's strengths.** In contrast to many educational approaches, particularly those used with children at risk for school failure, the Spectrum assessment approach seeks to identify children's areas of strength and to construct their education as much as possible around those domains of competence. Giving children experience in their areas of strength might not only increase their sense of self-esteem but suggest ways to address areas that are not as strong. For example, to boost Hallie's language skills, she could be asked to dictate instructions for disassembling a grinder or to tell a story about a machine she might invent.

5. **Attending to the stylistic dimensions of performance.** In order to

capture fully a child's approach to a task, we soon discovered it was important to look not only at a child's cognitive skills but at certain stylistic features as well. "Working styles" describe how a child interacts with the materials of a domain, such as his or her persistence, attention to detail, and level of confidence (see Figure 2). While some children exhibit the same working style across domains, others have styles that are much more content-specific. Such information has important implications for designing educational interventions. In Hallie's case, she revealed the capacity to become extremely focused and reflective when working in her area of strength.

In the Spectrum approach, all of the information collected on a child is compiled at year's end into a "Spectrum Profile": a short description, written in nontechnical prose, of the child's participation in the project's activities. The report addresses each child's areas of strength, either relative to himself or herself or to the child's peer group. Because of our belief that psychologists spend too much time ranking children and not enough time trying to help them, we also give concrete suggestions for follow-up activities that can be carried out at home or in the community. A "Parent Activities Handbook" suggests home activities that use inexpensive and easily acquired materials (for example, different ways to grow seeds, measuring and counting games, and so on).

Figure 2
Stylistic Features Examined in Project Spectrum

Child is:

- easily engaged/reluctant to engage in activity
- confident/tentative
- playful/serious
- focused/distractible
- persistent/frustrated by task
- reflective about own work/impulsive
- apt to work slowly/apt to work quickly

Child:

- responds to visual/auditory/kinesthetic cues
- demonstrates planful approach
- brings personal agenda/strength to task
- finds humor in content area
- uses materials in unexpected ways
- shows pride in accomplishment
- shows attention to detail/is observant
- is curious about materials
- shows concern over "correct" answer
- focuses on interaction with adult
- transforms task/material

Early Research Results

Hallie's class was one of two Eliot-Pearson preschool classrooms that participated in the initial phase of Spectrum research. This phase focused on assessing individual children's cognitive and stylistic strengths. Preliminary results from the two classrooms suggest that the Spectrum system does indeed identify distinctive intellectual profiles in young children[1] (for a full report, see Gardner and Hatch 1989, Krechevsky and Gardner 1990). We also found some evidence that a child's strength in one area might facilitate performance in another. For example, one child demonstrated exceptional storytelling ability, yet generally refused to participate in creative movement. However, she moved with unusual expressiveness when presented with storyboard props as a stimulus during one of the movement sessions.

With regard to working styles, most children seemed to exhibit domain-specific configurations. Many were reflective and attentive to detail only in their areas of strength. However, some children demonstrated a more general working style, which at times worked to their disadvantage. For example, one boy approached every activity with his own agenda of ideas. Although in the less structured environment of the class he conducted many compelling experiments to test his hypotheses, he was unable to adjust to more structured task situations.

Preliminary follow-up data on children in the original Spectrum class indicate that strengths and working styles remained roughly constant one to two years later. Sometimes the particular combination of a child's areas of strength and working style determined whether or not a strength would re-emerge. One girl, who in preschool constantly sought the positive regard of her peers, spent a lot of time at the writing table because her language abilities were advanced for her age group. However, because she was not the most able in her group the following year, she devoted the majority of her free time to art activities. Thus, the language abilities identified earlier were less likely to resurface and develop.

Responses from parents indicated that the areas where they were most surprised to learn of strengths included music perception, mechanical ability, and creative movement. A number of parents in the follow-up found it very useful to have a written profile to which they could compare more recent views of their child. The area parents were most likely to encourage at the one-year follow-up was drama, perhaps because they saw it as an especially effective way to combine ability in the language, social, and movement domains.

Currently, the Spectrum approach is being modified for use with children in kindergarten and 1st grade and for children who are more at risk for school failure. A broad-based Spectrum curriculum is being implemented in selected 1st grade classrooms with a large at-risk population in Somerville, Massachusetts. Children are being encouraged to develop their areas of strength in an apprentice-type model and to bring these strengths to bear on the established curricular goals of the 1st grade. We are administering pre- and post-tests to determine change in children's academic achievement, self-esteem, attitude toward school, and school adjustment.

Their Place in the Sun

It may be important at this point to outline the disadvantages and the advantages of Spectrum. First, a pluralized model of intelligence runs the risk that achievement-oriented parents will push their children in 15 areas, instead of a few. Second, parents and teachers may be tempted to track a child prematurely into pursuing his or her area(s) of strength. Finally, parents outside the mainstream culture may not be as concerned with their children's performance in domains not valued by the traditional culture.

Nevertheless, the approach offers a number of benefits. The Spectrum battery exposes children to more domains than are typically included in early childhood assessments or curriculums. Spectrum also actively involves children in the assessment process. They collect their work for the art portfolios and tape their own stories and songs. Time is also set aside for children to reflect on the activities in general. The Spectrum approach can be used on many levels: as assessment, as curriculum, or as a powerful philosophical framework through which to view children and their particular sets of strengths and working styles. In fact, the approach is as much a framework and set of ideas as it is a discrete program. Spectrum is currently being adapted for a variety of purposes by both researchers and practioners in the field.[2] Because the approach takes individual differences seriously, it enables teachers to accommodate diverse populations and to individualize their curriculums. Moreover, because of its provision of many ways to demonstrate excellence, including ways that go beyond conventional scholastic success, Spectrum may be particularly suited for at-risk children. At best, the Spectrum approach promises to increase the chances for all children to find their place in the sun.

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Notes

[1] Because of the small sample size, the results reported in this article should be regarded as tentative.

[2] We encourage these efforts and are interested in hearing from people who have tried to implement Spectrum. However, for reasons of logistics and limited resources, at present we cannot provide much in the way of support.

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Linking Restructuring to Authentic Student Achievement

by Fred M. Newmann

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The call to restructure education sends an ambiguous but serious message. The word *restructure* suggests that the system is so fundamentally flawed that such terms as *innovation* and *reform* aren't robust enough to describe the changes that are needed. But what exactly is the challenge that we face in restructuring? What needs to be changed, in what ways, and for what purposes?

The history of education in America has been punctuated repeatedly with powerful slogans that mobilize the energy of practitioners, researchers, and policy makers. Recent examples include "back to basics," "relevance," "community control," "cultural literacy," and "effective schools." Much of a slogan's appeal rests in its capacity to conjure up multiple meanings that can draw diverse constituencies together in a common cause. While a slogan galvanizes public opinion and focuses energy, thus offering new possibilities for action, its ambiguity brings the great risk that energy will be dissipated in scattered, even contradictory, directions.

Therefore, before committing ourselves to new structures, we should try hard to reach agreement on the nature of the system's failure. For without agreement on the nature of the illness and on the purpose of treatment, the pursuit of radical cures could do more harm than good for students.

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Today, reformers tend to address two main issues. The most obvious is the large proportion of students, especially low-income students of color, who fail in school and score poorly on nationally standardized tests. Much of the rhetoric about national education goals reflects concern about this group. Another issue—less popular, but perhaps even more disturbing—is that even those who succeed in school and score well on conventional tests have not been educated to cope successfully with the demands of personal, vocational, and civic life in contemporary society.[1]

Is the point of restructuring to provide a better way of teaching the current curriculum to students who haven't learned it through the old structure? Or is restructuring to be a vehicle to fundamentally change what is taught and how it is taught to all students? These alternative aims for restructuring can reflect conflicting goals of education, and the goals held by those pursuing each aim may lead to the creation of very different types of educational environments. It may not be necessary to choose between these stark alternatives, but the tension must be recognized. It reflects a persistent historical debate about educational ends that has no simple resolution and that even the restructuring movement will not solve once and for all.

Regardless of one's position on the forms of competence that schools should promote and regardless of the fact that large proportions of parents and educators perceive the schools to be working well, there are at least two grounds for seriously entertaining the prospect of fundamental organizational change. First, teachers face the persistent difficulty of engaging students in serious academic work in schools as we know them. Except for a few highly motivated students, most young people complete school only as a ritual. This pervasive disengagement creates massive problems of crowd control for educators and wastes the time of students and staff members alike.

Second, we must recognize the unfortunate record of traditional efforts to teach a virtually limitless list of fragmented pieces of declarative knowledge—e.g., that the issue of slavery divided the U.S. in the 19th century or that squares have equal sides and 90-degree angles. This enterprise, pursued over the ages as the main task of formal schooling, now actually undermines education. When schools try simultaneously to keep up with the explosion of knowledge and to accommodate the host of social demands placed on them, they cannot possibly give students the opportunity to develop in-depth understanding and the capacity for higher-order thinking that are required for success beyond school. The problems of disengagement and of excessive emphasis on coverage are related, and they exact their most tragic toll on students who, because of low income, cultural background, or lack of social support, do not succeed in schools as they are currently organized.

One of the biggest mistakes we make is the order in which we design the components of the education system. First, we set up an organizational structure; next, we plan the curriculum to fit the structure; and finally, we choose criteria for student success. Not until this last step do we articulate in a concrete way the ultimate educational purpose of the system. But by this point the outcomes are largely predetermined by the organizational structures and curriculum. Thus it should not be surprising that schooling seems so dysfunctional.

Moreover, the restructuring movement is about to perpetuate this error, because it, too, is trying to design organizational structures before clarifying purposes and reaching consensus on the educational ends that organizational structures should serve. For example, most of the talk one hears about school-site management, career ladders for teachers, or schools of choice never mentions how these mechanisms will teach students to write about literature, to reason about scientific phenomena, or to learn important geographic facts.

There is no reason to believe that restructuring will produce favorable results for students unless plans for new structures are guided by a vision of educational outcomes that articulates new standards for student achievement and for teaching. In this article I hope to nudge restructuring in this direction. First, I propose *authentic achievement* as the primary goal for students. Then, I advocate the need for *substantive conversation* in teaching, a new standard that is necessary to promote authentic student achievement. Finally, I suggest particular structures for student work that can facilitate authentic achievement and substantive conversation.

Authentic Achievement

The kinds of skills required to earn school credits, good grades, and high scores on typical tests are often considered trivial, meaningless, and contrived—by both students and adults. In contrast, a "restructured" vision of the goals of education seeks to evaluate performance activities that are worthwhile, significant, and meaningful: in short, activities that are authentic.

What criteria help us to recognize authentic forms of academic achievement? Consider the achievements of successful adults—scientists, musicians, business entrepreneurs, politicians, craftspeople, attorneys, novelists, physicians, designers, and so on. What are the characteristics of their work that justify calling their accomplishments authentic rather than contrived and trivial? Can we identify key distinctions between these authentic accomplishments and the work that students complete in school?[2]

People in the diverse fields named above face the primary challenge of producing, rather than reproducing, knowledge. This knowledge is expressed through discourse, through the creation of things, and through performances. We do not expect children to attain levels of competence comparable to those of skilled adults, but we do want students to develop in the same direction.

To progress on the journey toward adult competence, students should set their sights on authentic expressions of knowledge. That is, they must hone their skills through guided practice in producing original conversation and writing, through the repair and building of physical objects, through artistic and musical performance. The conventional curriculum asks students only to identify the discourse, things, and performances that others have produced—

e.g., by recognizing the difference between verbs and nouns or between socialism and capitalism; by matching authors with their works; or by correctly labeling rocks and body parts. Certainly, the production of knowledge must be based on an understanding of prior knowledge, but the mere reproduction of that knowledge does not constitute authentic academic achievement.

A second defining feature of authentic academic achievement is its reliance on a particular type of cognitive work that can be described as "disciplined inquiry." Disciplined inquiry, in turn, seems to consist of three features: (1) use of a prior knowledge base, (2) in-depth understanding rather than superficial awareness, and (3) production of knowledge in an integrated (rather than fragmented) form. In highlighting these features, I am not suggesting that students should be expected to make seminal contributions to the academic disciplines, to the professions, or to the arts. However, I am suggesting that students are quite capable of engaging in these forms of cognitive work when they are adapted to the students' levels of development.

1. Prior knowledge base. For new knowledge to be significant and valid, it must be based on substantive and procedural knowledge that has been accumulated previously by workers in the field, who establish facts, vocabularies, concepts, theories, algorithms, and conventions for the conduct and expression of inquiry. However, relying on a prior knowledge base does not always mean agreeing with intellectual traditions or continuing to develop them in a linear fashion. The ultimate point of disciplined inquiry is to move beyond existing knowledge—through criticism and the development of new models that are themselves stimulated by prior knowledge. Most of the cognitive work of schools consists of transmitting prior knowledge to students and asking them to reproduce it, rather than helping them to use it to produce new knowledge.

2. In-depth understanding. Disciplined inquiry tries to develop in-depth understanding of a problem, rather than only a passing familiarity with or exposure to pieces of knowledge. One masters prior knowledge not primarily to become superficially knowledgeable about a broad range of topics, but in order to develop complex understanding of a smaller number of issues. Such detailed understanding is particularly necessary for the production of new knowledge. In contrast, many of the cognitive tasks of school ask students to show only superficial awareness of a vast number of topics.[3]

3. Integration. To produce knowledge, one must assemble and interpret information, formulate ideas, and make critiques that cannot be easily retrieved from the existing knowledge base. All these activities require the ability to organize, synthesize, and integrate information in new ways. Students are unlikely to succeed at such tasks unless they learn to look for, to test, and to create relationships among pieces of knowledge that otherwise appear unconnected.

The third and final distinction between authentic achievements and traditional school achievements is that authentic achievements have aesthetic, utilitarian, or personal value apart from their value in documenting the competence of the learner. Indeed, this distinction may be the most crucial. When people write letters, news articles, insurance claims, or poems; when they speak a foreign language; when they develop blueprints; when they create a painting, compose a piece of music, or build a stereo cabinet, they try to communicate ideas, to produce a product, or to make an impression on others beyond the simple demonstration that they are competent. Achievements of this sort have special value that is missing from tasks contrived only for the purpose of assessing knowledge, such as spelling quizzes, laboratory exercises, or typical final exams. In many cases, the cry for "relevance" is simply a less precise expression of the desire that accomplishments should have intrinsic value beyond their value as indicators of success in school.

To summarize, the idea of authentic achievement requires students to engage in disciplined inquiry to produce knowledge that has value in their lives beyond simply proving their competence in school. Mastery of this sort is unlikely to be demonstrated in familiar testing and grading exercises. Instead, such mastery is more often expressed in the completion of long-term projects that result in the creation of discourse, things, and performances of interest to students, their peers, and the public at large.

Why should we aim toward authentic achievement? I suggest at least two compelling reasons, which respond directly to the problems of the conventional curriculum that I mentioned earlier. First, participation in authentic tasks is more likely to motivate students and to sustain the hard work that learning requires. Because authentic work has value beyond the mere demonstration of competence in school and because it permits more comprehensive use of the mind, students will have a greater stake in authentic achievement. Second, authentic academic challenges are more likely to cultivate the higher-order thinking and problem-solving capacities that are useful both to individuals and to society. The mastery gained in school would then transfer more readily to life beyond school and thus increase the efficiency of our public investment in schooling.

To develop organizational structures consistent with this vision, educators will need to plan "backwards." Beginning with a conception of authentic achievement and of the specific projects that express it, they will need to select appropriate content within the subjects. They will also need to consider the kinds of human interaction—involving teachers, students, and others—that promote disciplined inquiry into the subject. Although I cannot address organizational needs for specific subjects in this article, one aspect of interaction seems critical to authentic achievement in many subjects. This is the need for substantive conversation in instruction, which constitutes a major departure from present practice.

Substantive Conversation

When the curriculum is geared toward the goal of authentic achievement, new forms of teaching will be necessary. No longer will it be possible for students to succeed in school simply by listening to the teacher and responding to questions that can be answered in half a dozen words. To complete authentic projects, students will need to formulate and to ask questions, to explain themselves to peers and to adults, and to refine their ideas. While many authentic achievements require capacities other than verbal discourse (e.g., working with one's hands, making mathematical estimations, using aesthetic sensitivities), substantive conversation between the learner and some supportive resource—teacher, peer critic, or other knowledgeable authority—is usually necessary. I emphasize substantive conversation, not because it alone is sufficient to develop all forms of authentic achievement, but because it is usually critical for success in authentic tasks and because conversation is the primary medium through which teachers and students communicate.

Substantive conversation differs from conventional classroom talk, in which the teacher usually has only two purposes (aside from disciplinary ones) in speaking to students: to transmit an item of declarative knowledge (usually a definition or a fact) or to determine whether the student can reproduce that item.[4] The student's goal (assuming that he or she desires to cooperate) is to give the answer that the teacher has in mind. The teacher maintains control in that he or she knows, prior to the interaction, what pieces of knowledge must be communicated and what answers will be acceptable.

In a substantive conversation, the purpose of talking is quite different. Each person is trying to express a point of view (often in order to persuade the other), to understand why the other holds a particular viewpoint or interpretation, or to arrive at a solution to a problem that neither has previously solved. This last purpose is the most difficult to fulfill, but it is perhaps the most likely to render the work authentic.

In pursuing any of these ends, the teacher uses talk to integrate subject matter into the student's meaning system, and the student tries to understand how the teacher's messages might empower him or her in the world. In this sense, each is interested in what the other has to say, the course of the conversation is less predictable than in conventional classroom exchanges, and each participant has some sense of ownership. To fulfill these purposes, substantive conversation requires sustained, continuous talk between two or more people. In school as we know it, the two key participants are usually student and teacher, but students can also learn through conversations with their peers, with other adults, and perhaps with well-programmed computers. Teacher/student conversation should remain central. But to expand students' opportunities for expression and feedback, it will be necessary to rely substantially on and to support these other sources as well.

What is the connection between substantive conversation and authentic achievement? Begin with the definition: authentic achievement is expressed in discourse, things, and performances that make reasonably complete, integrated statements and that reflect students' production of in-depth knowledge. Then ask the question, How can we instruct students to make such statements?

We can show them models of authentic accomplishments of others, and we can give them critical elements of declarative knowledge on which to build. But how will they learn to make their own statements? Substantive conversation is the key. It provides the crucible for practice, for seeking new knowledge that relates to the problem at hand, and for trial, feedback, and revision. In short, substantive conversation forces us to transform declarative knowledge into applied, integrated knowledge.

Structures That Facilitate Authentic Achievement

The Council of Chief State School Officers divides restructuring into four main categories: school governance (including decentralized authority and school choice), reforming the nature and organization of curriculum and instruction, new professional roles for educators, and accountability (especially new methods of assessment and direct state intervention).[5]

This analysis applies most directly to curriculum, instruction, and accountability. But I believe that, unless the entire restructuring agenda focuses more closely on authentic student achievement and on substantive conversation to attain it, restructuring will produce at best only cosmetic changes in students' education.

Assuming a commitment to these goals, what structural conditions seem necessary to achieve them? The conditions I propose below are in no way exhaustive. They outline certain key conditions under which students would work, but they do not provide structures of school governance, detailed systems of assessment, or specific new structures for the professional development of teachers. My argument has implications for these areas as well, and I do support the need for providing teachers with working conditions that enable new forms of professional support. But my central concern here is the structure of the instructional environment.

At least four conditions seem essential for students to complete authentic accomplishments: collaboration, access to tools and resources, worker discretion or opportunity for ownership, and flexible use of time.

Collaboration. Achievements outside of school often depend on the opportunity to ask questions of, to receive feedback from, and to count on the help of others, including peers and authorities. In contrast, typical school activities require each student to work alone. Working together is often prohibited, because it is seen as a form of cheating. Of course, it is important for students to learn to work on their own and not become too dependent on others. But if opportunities to cooperate are consistently denied, students will not experience a critical process that adults, both expert and novice, consistently rely on for success.

Useful collaboration depends to a great extent on opportunities for substantive conversation, which itself requires special structural conditions. More time will be needed for teachers to communicate with individual students through sustained talk and writing and for students to talk with one another.

Substantive conversation also entails major shifts in the roles of teachers and students. Teachers will function more as mentors and coaches, less as depositories of static knowledge to be reproduced. Students will function more as constructors and producers of knowledge. They will rely on teachers for help, but they will not be mere absorbers or consumers of everything the teacher says. Students will also have to take on the new roles of seeking help from and giving help to one another as they learn.

Access to tools and resources. When competent people complete significant accomplishments—e.g., writing books, designing buildings, composing music, or reaching collective bargaining agreements—they usually have made use of a variety of printed materials and such machines as telephones, computers, and laboratory equipment. The information they require is generally too vast and too rapidly updated to commit to memory. In medieval times, before the invention of the printing press, becoming educated required memorizing the contents of key manuscripts, because future access to them was unlikely. But today increasing specialization and the explosion of knowledge create a new challenge. Possession of prior knowledge is critical to disciplined inquiry, but it is now impossible to teach students all the relevant information they will need to complete authentic tasks. The new challenge is to teach students to use tools and resources to find the appropriate knowledge when they need it.

Discretion and ownership. Rather than always toiling within the confines of predetermined routines arbitrarily dictated by authorities, the creators of authentic work influence the conception, execution, and evaluation of the work itself. At a minimum this entails exercising some control over the pace and procedures of learning; over opportunities to ask questions and to study topics deemed important; and over constructing and producing knowledge in one's own language, rather than merely reproducing the language of others.

There are, of course, important limits on the extent to which students should control their learning of academic subjects. Certain facts, definitions, concepts, algorithms, and processes of verification must be assimilated according to the standards of the disciplinary fields. But for this kind of learning to be translated into authentic products, students must enjoy some autonomy and discretion in its application.

Flexible use of time. The significant achievements of disciplined inquiry often cannot be produced within rigidly specified time periods. Adults working to solve complicated problems, to compose effective discourse, or to design products are rarely forced to work within the rigid time constraints imposed on students, such as the 50-minute class or the two-hour examination.

Standard time schedules stem from bureaucratic procedures designed to manage masses of students and diverse course offerings. Since they have nothing to do with the time requirements of disciplined inquiry, they can reduce the authenticity of student achievement. Achievements in noninstructional tasks, such as journalistic writing, interior design, or medical care, do involve deadlines and time limits. But in such work the schedules tend to be determined more by the nature of the work than by the requirements of institutional management.

The four conditions outlined above suggest at least the following changes in the structuring of students' work.

- To stimulate collaboration and the substantive conversation so crucial to it, more time must be allocated to individualized and small-group instruction.
- Students' access to knowledge must be enhanced by greater use of technology (telephones as well as computers) and by opportunities to learn from sources outside of school.
- Students need to exercise discretion and assume responsibility in the planning, execution, and evaluation of their work, which further underscores the need for individualized and small-group work along with assessment that accepts diverse ways of demonstrating competence.
- Instructional time should be organized to permit more sustained, long-term, and in-depth investigation, in contrast to the fixed time slots designed for survey coverage.
- Assessment tasks calling for the production of discourse, things, and performances will require new procedures and in some cases the participation of individuals who are not members of the school staff to evaluate student performance.

Instituting these changes will contribute to authentic achievement. But they alone cannot guarantee it, for ultimately the quality of student achievement will depend on the quality of conversation that students have with teachers and with one another. For years substantive conversation has been difficult to find in schools, but only partly because of structural constraints. Even if teachers were blessed with more time and much lighter teaching loads, I suspect that substantive conversation would still be rare, because the goals of authentic achievement and substantive conversation also presume major shifts in prevailing concepts of education. Organizational changes alone will not modify long-standing conceptions of knowledge and deeply socialized habits of didactic teaching that direct most of our educational efforts toward inauthentic forms of mastery.

Just as plans for restructuring should begin with the conditions in which students learn, the next step is to consider the working conditions that teachers need in order to generate substantive conversation. Again, we must not expect organizational structures alone to transform teaching. However, given the complexities of the teaching task, we cannot emphasize enough the need to provide teachers and administrators with sufficient authority, time, and assistance to reflect critically on their practice, to experiment, to fail, and to try again. Beyond enabling teachers to increase the proportion of time they spend interacting with individual students and small groups, we must work to give teachers more opportunity to collaborate, and we must provide for regular, sustained professional development that focuses on the goals of substantive conversation and authentic achievement.

Experiences in restructuring to date reveal three obstacles that dramatize the need for this kind of support. First, teachers, parents, and students who have experienced only the conventional version of education—especially those who have been successful—cling tenaciously to it, even when they have the opportunity to make substantial changes. Faith in conventional practice is fortified by the large proportion of students who do succeed on conventional measures, both in school and beyond. Second, external pressures for district, state, and national accountability, coupled with the need for ways to determine admission to college, continue to sanctify mastery of declarative knowledge as the most important goal of schooling. Finally, the struggle to establish new collaborative roles for teachers is stressful and time consuming; it drains energy and leaves diminished personal resources for thinking about new forms of achievement and curriculum.

The history of education reform suggests that we have yet to see fundamental change on a grand scale.[6] We might argue that the contemporary sense of urgency and the scope of the current restructuring movement combine to offer a unique opportunity. But to avoid the costly mistakes of previous efforts, we must resist the tendency to institute administrative changes devoid of fresh educational vision. If we keep our sights on the targets of authentic student achievement and substantive instructional conversation, restructuring could form a new chapter in educational history—and one well worth the effort.

Notes

1. Albert Shanker, "The end of the traditional model of schooling—and a proposal for using incentives to restructure our public schools," *Phi Delta Kappan* (January 1990), pp. 344–357.

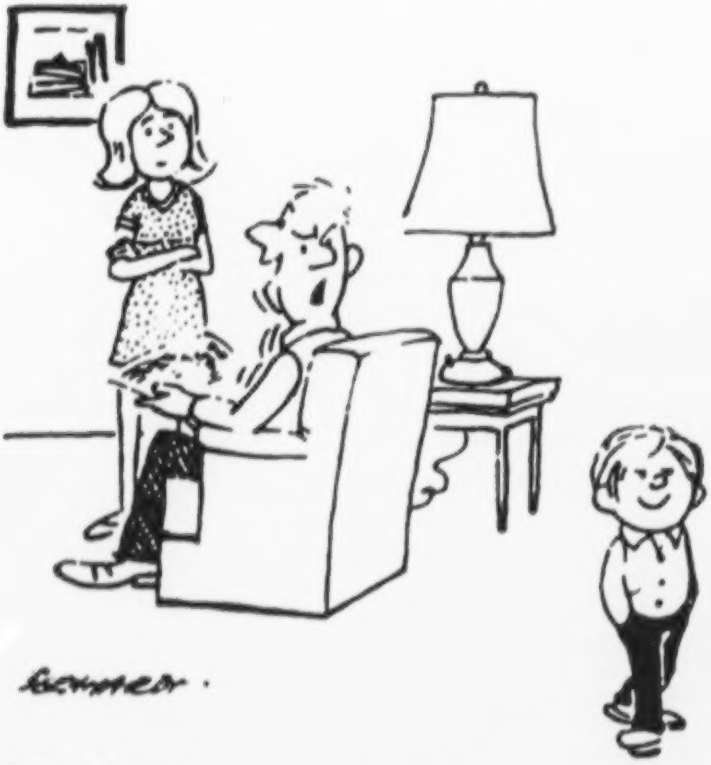
2. This complicated matter involving controversial educational values has not yet received extensive scholarly attention. Yet it begs for interdisciplinary analysis of the relationship between formal attempts to educate and the ways that human competence is expressed in noneducational settings. The conception I propose here builds on Harold Berlak, ed., *Toward a New Science of Educational Testing and Assessment* (Albany, NY: State University of New York Press, 1992); Fred M. Newmann and Doug Archbald, *Beyond Standardized Testing: Assessing Authentic Academic Achievement in the Secondary School*(Reston, VA: National Association of Secondary School Principals, 1988); John Raven, "Toward a model of competence, motivation, and behavior and a paradigm for assessment," in Berlak, op. cit.; Lauren B. Resnick, "Learning in school and out," *Educational Researcher* (December 1987), pp. 13–20; and Grant Wiggins, "A true test: Toward more authentic and equitable assessment," *Phi Delta Kappan* (May 1989), pp. 709–713.

3. A commitment to depth over coverage entails no retreat from liberal education into narrow forms of vocationalism, as some might expect. The effort to concentrate on complex understanding welcomes study of a wide variety of disciplines and paths to knowledge. Reducing the emphasis on superficial exposure implies no necessary narrowing of the curriculum as a whole.

4. This analysis is based in part on the work of Martin Nystrand and Adam Gamoran, "Student engagement: When recitation becomes conversation," in Hersholt Waxman and Herbert Walberg, eds., *Contemporary Research on Teaching* (Berkeley, CA: McCutchan, 1991).

5. *Success for All in a New Century: A Report by the Council of Chief State School Officers on Restructuring Education* (Washington, DC: Council of Chief State School Officers, 1989).

6. Larry Cuban, "Reforming education, again, again, and again," *Educational Researcher* (January/February 1990), pp. 3–13. ◀



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"Jimmy tells me he's in the top 98% of his class. That sounds pretty good.... Hey, come back here!"

Learning Essential Skills

Success for *All*

by Nancy A. Madden, Robert E. Slavin, Nancy L. Karweit, Lawrence Dolan, and Barbara A. Wasik

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Every September three million six-year-olds enter our nation's first grades. Every one of them is absolutely confident that he or she is going to do well in school. Every one of them is smart and knows it. Every one is highly motivated, eager to learn.

Just nine months later, many of these bright, enthusiastic youngsters have learned a hard lesson: they have failed first grade. In some urban districts as many as 20 percent of first graders are retained each year. Others barely squeak by but are beginning to suspect that they are not going to make it all the way. As they proceed through the elementary grades, many students realize that they are failing at their full-time jobs. When this happens, things begin to unravel. Failing students begin to have poor motivation and poor self-expectations, which lead to continued poor achievement. They are caught in a downward spiral that ends in despair, delinquency, and dropping out.

Remediating learning deficits after they are already well-established is extremely difficult. Children who have already failed to learn to read, for example, become anxious about reading, and their anxiety interferes with their ability to focus on it. Their subsequent motivation to learn to read may be low. Clearly, the time to provide additional help to children who are at risk of school failure is early on, when they are still motivated and confident and when any learning deficits are relatively small and remediable. The most important goal in educational programming for students at risk is to try to make certain that we do not squander the greatest resource we have: the enthusiasm and positive self-expectations of young children themselves.

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The practical implication of this ideal is that Chapter 1, special education, and other services for at-risk children must shift from an emphasis on remediation to an emphasis on prevention and early intervention. In an educational setting, prevention means providing developmentally appropriate preschool and kindergarten programs so that students will enter first grade ready to succeed, and it means giving regular classroom teachers effective instructional programs, curricula, and staff development to enable them to help most students succeed the first time they are taught. Early intervention means that supplementary instructional services are provided early in students' schooling and that they are intensive enough to bring at-risk students quickly to a level at which they can profit from high-quality classroom instruction.

In his article in the April 1989 issue of the *Kappan*, Robert Slavin describes a vision of what Chapter 1 could become. In the present article, we describe the nature and outcomes of a Chapter 1 program that has already been designed around this vision and so emphasizes prevention and early, intensive intervention.

The name of this program is Success for All. The idea behind Success for All is to use everything we know about effective instruction for students at risk in order to direct all aspects of school and classroom organization toward the goal of preventing academic deficits from appearing in the first place, to recognize and intensively intervene with any deficits that do appear, and to provide students with a rich and full curriculum to enable them to build on their firm foundation of basic skills. The commitment of Success for All is to do whatever it takes to see that every child makes it through third grade at or near grade level in reading and other basic skills and then goes beyond this level in the later grades.

Success for All has been implemented and evaluated in a total of seven schools in three districts. These schools are among the most disadvantaged and lowest-achieving schools in their districts; all but one (in rural Berlin, Maryland) qualified for Chapter 1 schoolwide projects, which means that at least 75 percent of students receive free lunch. Five of the schools are located in Baltimore and serve student bodies that are almost 100 percent African-American. The one Philadelphia school has a majority of Cambodian students, who arrive in kindergarten with little or no facility in English. The one rural school, on Maryland's Eastern Shore, is evenly split between African-American and white students. The characteristics of the schools are summarized in Table 1 (page 336).

Table 1 also shows the levels of resources added to each school to implement Success for All. The two high-resource schools received funding of approximately $400,000 to hire additional tutors, family support staff, a full-time project facilitator, and enough teachers and aides to provide preschool experiences for all children. Moderate-resource schools received $100,000 to $200,000 and low-resource schools received $40,000 (to pay for materials and a half-time facilitator). Of course, these three resource levels are only relatively high or low within the context of the districts involved; the money added to the highest-resource Baltimore schools still does not bring these schools up to the average per pupil expenditure for the state of Maryland.

Success for All uses a combination of approaches to meet its objectives. The specific components that make up the program are described below.[1]

Table 1
Characteristics of "Success for All" Schools

School/Location	Enrollment	Ethnicity	Free lunch %	Yrs. in program	Resource level	No. of tutors	Preschool	Full-day kindergarten	Additional family support staff	Full-/half-time facilitator
Abbottston Elem., Baltimore	550	97% black	83	3	High	6	Yes	Yes	2	Full
City Springs Elem., Baltimore	500	99% black	97	2	High	9	Yes	No	2 1/2	Full
Dallas Nicholas Elem., Baltimore	439	99% black	98	2	Low	2	Yes	No	0	Half
Dr. Bernard Harris Elem., Baltimore	634	100% black	94	2	Low	3	Yes	No	0	Half
Harriet Tubman Elem., Baltimore	475	100% black	94	2	Low	3	Yes	Yes	0	Half
Francis Scott Key Elem., Philadelphia	622	55% Asian 21% white 21% black	96	2	Moderate	4	No	Some	0	Full
Buckingham Elem. Berlin, MD	530	50% black 50% white	40	1	Moderate	3	Yes	No	0	Half

Program Elements

Reading tutors. One of the most important elements of the Success for All model is the use of tutors to promote students' success in reading. One-to-one tutoring is the most effective form of instruction known.[2] Success for All tutors are certified teachers with experience teaching Chapter 1, special education, and/or primary reading. They work one-on-one with students who are having difficulties keeping up with their reading groups. Tutoring sessions last 20 minutes, with the time taken from an hour-long social studies period. In general, tutors support students' success in the regular reading curriculum rather than teach different objectives. For example, if the regular reading teacher is working on a story emphasizing words with long vowels, so does the tutor. However, tutors seek to identify learning problems, and they use different strategies to teach the same skills, as well as teaching metacognitive skills beyond those taught in the classroom program.[3] High-resource schools have six or more tutors, moderate-resource schools have three to five, and low-resource schools have two to three, depending on school size, the need for tutoring, and other factors.

During daily 90-minute reading periods, tutors serve as additional reading teachers to reduce the class size for reading to about 15 in high-resource schools and to about 20 in moderate- and low-resource schools (because they have fewer tutors to reduce class size). Reading teachers and tutors use brief forms to document students' specific problems and needs, and they meet at regular times to coordinate the approaches they will use with individual students.

Initial decisions about placement in reading groups and the need for tutoring are based on informal reading inventories that the tutors administer to each child. Subsequent reading-group placements and tutoring assignments are determined by curriculum-based assessments conducted every eight weeks, which include teacher judgments as well as more formal measures. First graders receive priority for tutoring, on the assumption that the primary function of the tutors is to help all students be successful in reading the first time.

Reading program. During most of the day, students in grades 1 through 3 are assigned to heterogeneous, age-grouped classes of about 25 students each. But during a regular 90-minute reading period, they are regrouped into reading classes of 15 to 20 students, all at the same level of reading performance. A second grade, first semester reading class, for example, might contain first-, second-, and third-grade students—all reading at the same level.

Regrouping allows teachers to teach the whole reading class without having to break the class into reading groups. This system greatly reduces the time students spend on seatwork and increases the time devoted to direct instruction, eliminating workbooks, dittos, or other follow-up activities that are needed in classes with multiple reading groups. The regrouping is a form of the Joplin Plan, which has been found to increase reading achievement in the elementary grades.[4]

Reading teachers at every grade level begin the reading time by reading children's literature to students and engaging them in a discussion of the story to enhance their understanding of what has been read, their listening and speaking vocabulary, and their knowledge of story structure. In kindergarten and first grade, the program emphasizes development of basic language skills with the use of Story Telling and Retelling (STaR), which involves the students in listening to, retelling, and dramatizing children's literature.[5] Big books and oral and written composing activities allow students to develop concepts of print and knowledge of story structure. Peabody Language Development Kits are used to work on receptive and expressive language.

In the second semester of kindergarten, the students start the Beginning Reading program. In this program, letters and sounds are introduced in an engaging series of activities that begins with oral language and moves into written symbols. Once letter sounds are taught, they are reinforced by the reading of stories that use the sounds. This K–1 reading program uses a series of phonetically regular but meaningful and interesting minibooks and emphasizes repeated oral reading to partners as well as to the teacher, instruction in story structure and specific comprehension skills, and integration of reading and writing.

When students reach the primer reading level, they use a form of Cooperative Integrated Reading and Composition (CIRC)[6] with the district's basal series. CIRC uses cooperative learning activities built around story structure, prediction, summarizing, vocabulary building, decoding practice, and story-related writing. Students read with partners, take part in structured discussion of the basal stories, and work in teams toward mastery of the vocabulary and content of the story. Story-related writing is also shared within teams.

In addition to these story-related activities used with the basal series, teachers provide direct instruction in reading comprehension skills, which students practice in their teams. Classroom libraries of trade books at students' reading levels are supplied for each teacher, and students read books of their choice at home for 20 minutes each night. Home readings are shared via presentations, summaries, puppet shows, and other formats twice a week during "book club" sessions. Research on CIRC has found that it significantly increases students' reading comprehension and language skills.[7]

Beginning in their second year of using the Success for All model, the schools usually implement programs in writing/language arts and mathematics that are based primarily on the principles of cooperative learning.[8]

Eight-week reading assessments. At eight-week intervals, reading teachers assess students' progress in the reading program. The results are used to determine who needs tutoring, to change students' reading groups, to suggest other adaptations in students' programs, and to identify students who need other types of assistance, such as family interventions or screening for vision and hearing problems.

Preschool and kindergarten. Most of the schools using the Success for All model provide a half-day preschool and/or a full-day kindergarten for eligible students. The preschool and kindergarten programs focus on providing a balanced and developmentally appropriate learning experience for young children. The curriculum emphasizes the development and use of language. It provides a balance of academic readiness and nonacademic music, art, and movement activities in a series of thematic units.

Family support team. One of the basic tenets of the Success for All philosophy is that parents are an essential part of the formula for success. A family support team works in each school, helping to make families feel comfortable in the school as well as providing specific services. In the high-resource schools, social workers, attendance monitors, and other personnel are added to the school's usual staff. In moderate- and low-resource schools, the family support team consists of the Chapter 1 parent liaison, the vice principal (if any), the counselor (if any), a Success for All facilitator, and any other appropriate staff members already present in the school.

The family support team works to involve parents in promoting their children's success in school. It contacts parents whose children are frequently absent to see what can be done to help the family improve the child's attendance. Parenting education is provided for interested families, and family support staff, teachers, and parents work together to solve school behavior problems. The family support staff is also called on to provide assistance when students seem to be working at less than their full potential because of problems at home. Families of students who are not receiving adequate sleep or nutrition, who need glasses, who are not attending school regularly, or who are exhibiting serious behavior problems receive family support assistance.

The family support team is strongly integrated into the academic program of the school. Teachers and tutors often refer children who are not making adequate academic progress to the family support team, thereby providing an additional stage of intervention above and beyond that offered by the classroom teacher or tutor. The family support team also encourages and trains parents to fill numerous volunteer roles within the school, ranging from helping in the school cafeteria to providing a listening ear to young readers.

Program facilitator. A program facilitator works at each school to oversee (with the principal) the operation of the Success for All model. High-resource schools have a full-time facilitator, while moderate- and low-resource schools have half-time facilitators. The facilitator helps plan the Success for All program, helps the principal with scheduling, and pays frequent visits to classes and tutoring sessions to help teachers and tutors with individual problems. He or she works directly with the teachers on implementation of the curriculum, classroom management, and other issues; helps teachers and tutors deal with any behavior problems or other special problems; and coordinates the activities of the family support team with those of the instructional staff.

Teachers and teacher training. The teachers and tutors for the program are all certified teachers. They receive detailed teacher's manuals and two days of inservice training at the beginning of the school year. For teachers of grades 1 through 3 and for reading tutors, these training sessions focus on implementing the reading program, while the manuals cover general teaching strategies as well as specific lessons. Preschool and kindergarten teachers and aides are trained in use of the STaR and Peabody programs, in use of thematic units, and in other aspects of the preschool and kindergarten models. Tutors later receive an additional day of training on tutoring strategies and reading assessment.

Throughout the year, facilitators and other project staff members make additional inservice presentations on such topics as classroom management, the pace of instruction, and cooperative learning. Facilitators also organize many informal sessions to allow teachers to share problems and solutions, suggest changes, and discuss individual children. The staff development model used in Success for All emphasizes relatively brief initial training with extensive classroom follow-up, coaching, and group discussion.

Special education. Every effort is made to deal with students' learning problems within the context of the regular classroom, with the additional support of tutors. Tutors evaluate students' strengths and weaknesses and develop strategies to teach them in the most effective ways. In some schools, special education teachers serve as tutors and reading teachers for students who have been identified as learning disabled as well as for other students experiencing learning problems.

Advisory committee. An advisory committee composed of the building principal, the program facilitator, a teacher representative, and the family support staff meets regularly to review the progress of the program and to identify and solve any problems that arise.

Evaluation

Each of the seven schools using the Success for All model was matched with a comparison school that was similar in the percentage of students receiving free lunch, in the historical achievement level, and in other factors. Within each pair of schools, students were individually matched on the earliest standardized test scores available.

At the high-resource and moderate-resource schools and their comparison schools, all students in grades 1 through 3 were given individually administered tests. In the three low-resource schools and their comparison schools, one-third of all students were randomly selected to be tested. The tests used were the Durrell Oral and Silent Reading Tests and the Woodcock Letter-Word Identification and Word Attack scales.[9]

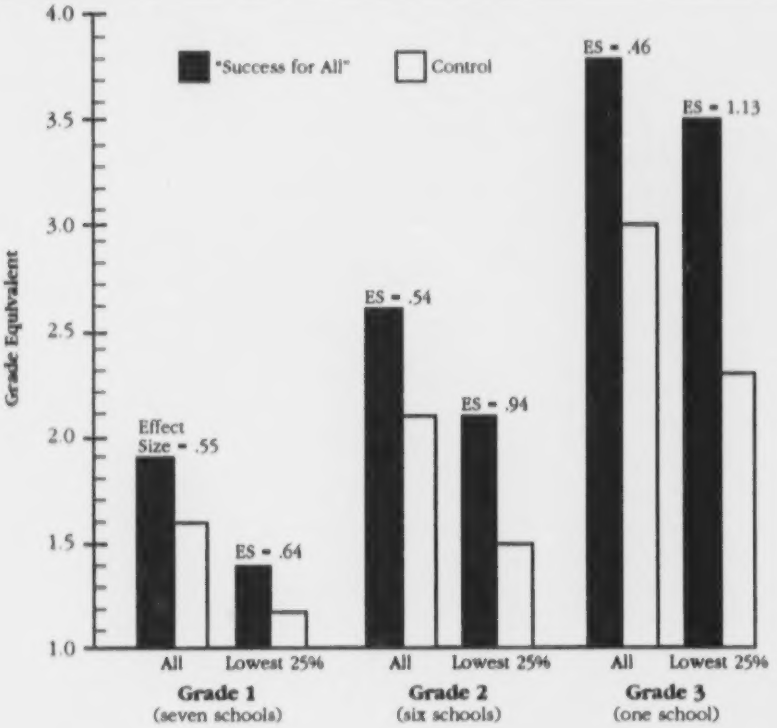
Reading performance outcomes are summarized in Figure 1. The chart presents mean grade equivalents for students who have been in Success For All and for students who have been in the matching control schools since beginning formal reading instruction in the first grade. Only in the original pilot school, Abbottston Elementary, have students been in the program for three years, so third-grade data are presented only for this school and its comparison school. Six of the seven schools have been in the program at least two years. Effect sizes represent the proportion of a standard deviation separating students in the Success for All program from control students. In essence, the reported effect sizes represent a meta-analysis of findings from several separate experimental/control comparisons.[10]

Figure 1 shows that, on average, students in the Success for All program are far outperforming matched control students on individually administered tests of reading. The overall effect sizes of +.55 in first grade, +.54 in second grade, and +.46 in third grade are all substantial. In grade-equivalent terms, the difference between students in the Success for All schools and those in control schools rises from three months in first grade to five months in second grade and eight months in third grade. (The fact that effect sizes do not rise over the three-year period does not indicate a static effect; effect sizes remain stable only because standard deviations rise each year.)

As a point of contrast, a Tennessee study found the effects of reducing class size from 25 to 15 for four years (grades K–3) to average about +.25, and other studies of this level of class-size reduction have found even smaller effects.[11] More important, however, is the effect on the lowest-achieving quarter of each class, as determined by pretest scores. For students in the lowest-achieving quarter, this effect size rises from +.64 in first grade (two months) to +.94 in second grade (six months) and to +1.13 in third grade (1.2 years). Low achievers at Abbottston Elementary—those who had been in the program since first grade—averaged near grade level at the end of third grade (grade equivalent = 3.5). Matched control students scored far lower (grade equivalent = 2.3). Not a single Abbottston student scored two years below grade level, a typical criterion for identifying a student as learning disabled;

Figure 1

Mean Effects of "Success for All" on Reading Achievement



10 percent of control students scored that low.[12] At Francis Scott Key Elementary School in Philadelphia, very positive effects were also found for the school's many Cambodian students with limited proficiency in English.[13]

The Importance of Early Intervention

The findings of the evaluations of Success for All indicate that focusing on prevention and early intervention can significantly increase the reading performance of disadvantaged and at-risk students, as well as reducing retentions and special education placements. In particular, the program substantially increases the achievement of those students who are most at risk. Not every third grader in Success for All who has been in the program since first grade is reading at grade level, but virtually every third grader is reading close enough to grade level to profit from good classroom instruction without a continuing need for remedial or special education.

One interesting finding from the research on Success for All is that the effects of the program are much less significant for students who begin it after first grade than for those who begin in preschool, kindergarten, or first grade. A typical pattern is for program effects to be large in first grade during the first year of implementation, in first and second grades during the second year, and in first, second, and third grades during the third year.[14] This finding points up the importance of prevention and early intervention. A second or third grader who is already far behind in basic skills may not profit as much from improvements in regular classroom instruction or even from remedial tutoring. In contrast, students who end first grade with a solid foundation of success in reading can profit from enhanced instruction and continue to build on this foundation.

What this implies is that both early intervention and improvement in classroom practice are needed. Early intervention alone is not enough. For example, the Reading Recovery program provides one-to-one tutoring to first graders but does not change regular classroom instruction.[15] Longitudinal studies of this approach have found that gains made in first grade are maintained but do not grow over time. What is needed is a strategy of preventing learning problems from appearing in the first place and then of improving classroom instruction throughout the grades to fan the flame of learning ignited in preschool, kindergarten, and first grade.

Does Money Matter?

In general, the average achievement at high-resource schools is greater than that at low-resource schools, but not dramatically so until the effects for the bottom 25 percent of students are examined. For these students, reading achievement is substantially higher in the high-resource schools. In addition, the high-resource schools were able to reduce retentions to near zero and to reduce special education placements significantly. The additional resources contributed mostly to ensuring success for *every* child. They were used to pay for additional family support resources and tutors, which made a large difference with a small number of children. That is, it appears to be possible to increase average achievement levels significantly with modest additional investments, but to do what is necessary to see that *every* child is successful is expensive, at least in the short run.

On the other hand, reducing retentions and special education referrals and placements creates major savings in the long run, so even in the most cold-blooded economic calculation the high-resource approach may be cost-effective.[16] Simply reducing retention from 11 percent to zero at Abbottston saves approximately $240,000 per year, more than half the program cost. Also, it is important to note again that the additional program costs of the two high-resource schools amount to less than $800 per student, less than the difference in per-pupil costs between schools in Baltimore and schools in the rest of Maryland.

The importance of having additional resources to use in a coordinated fashion to provide whatever is necessary for each child is illustrated by the story of Tavon (not his real name). Tavon, a student at City Springs Elementary School, lives in a Baltimore housing project. He had completed kindergarten the year before Success for All began at City Springs. According to his teachers' reports, Tavon was already headed for serious trouble. He was angry and aggressive, dealing with both teachers and other students as if they were out to get him. Tavon had to be removed from class frequently because of his disruptive behavior. He had little energy to put into learning when he was in school, and he was not in school very consistently. When he did come to school, he usually arrived late, closer to 10:30 than to 8:30 a.m.

Tavon was born when his mother was a young teenager. His mother felt helpless. She wanted her son to be successful, but, being hardly more than a child herself, she had few resources to help him. Her response to the school was just like her son's. The only way she knew how to react to her son's problems in school was to become angry and aggressive. In the first weeks of first grade, when the school contacted her about problems that Tavon was having, she stomped into school cursing and threatening to remove him since the school couldn't deal with him.

Coordinated efforts by teachers, the facilitator, family support team members, and the family have turned things around for Tavon. After the social worker made Tavon's mother feel welcome, she was able to convince her to participate in parenting classes held at the school, which made Tavon's mother more confident in her ability to handle her son. With concrete assistance from the attendance monitor, Tavon's attendance started to improve. At first, the school called his mother every morning to get her started early enough to get Tavon to school. For a while, the attendance monitor met her and her son halfway to school. Everyone tried to make Tavon's mother feel welcome at the school and to help her feel better about herself.

Even as his behavior improved, Tavon still had very serious academic problems; on all tests given at the beginning of first grade, he showed no evidence of having any prereading skills. Tavon was given an instructional program in which he could be successful and was given one-to-one tutoring, which not only provided the academic support that he needed but also gave him emotional support. His tutor was a special person with whom he could share his struggles and achievements.

Tavon's story is one of success. As his mother began to cooperate with the school, Tavon's attitude toward school improved. He still has a strong temper, but he is learning how to deal with his anger in a constructive way. Tavon is in school on time every day. Learning still does not come easily for him, but he knows that, if he works hard, he can learn—and he is proud of the steady progress he is making. His mother has developed a good deal of self-confidence as well and is now employed in a store in the neighborhood.

Tavon's experience, which is like that of many students in Success for All, shows the importance of having resources that can be applied to students' individual needs. The number of person-hours invested in children like Tavon is staggering, yet that is what is required to ensure that every child will succeed. These children cannot be guaranteed success unless the additional money necessary to add social workers, attendance monitors, and tutors is available in their schools.

Conclusions

The evaluations of Success for All took place in some of the most disadvantaged schools in the country, including the highest-poverty schools in Baltimore and Philadelphia. These schools suffer from all the problems of inner-city schools—underfunding, low staff morale in many cases, bureaucratic problems of large urban systems, unsafe neighborhoods, and limited ability on the part of many parents (often due to involvement with drugs) to support their children's success in school. Yet these schools have resources that have traditionally been underutilized: many dedicated teachers and administrators who care deeply about children, many parents who are able to support the school if they are invited to do so, and—most important—young children who have not yet experienced anything that would contradict their very positive self-images as learners.

What Success for All shows is that, even in the most disadvantaged of schools, with all the urban problems so often associated with them, the human strengths that have always been there can be activated to significantly enhance the educational outcomes for children. In less depressed environments, the impacts can be even easier to produce: after one year, the rural Buckingham Elementary School not only brought its lowest-achieving first graders to grade level but also reduced special education placements from 12 per year to only three.[17]

Success for All provides one practical demonstration of what Chapter 1 could and should become. Slavin has argued that Chapter 1 should be focused on guaranteeing literacy for all students, on staff development to enable regular classroom teachers to use effective strategies with disadvantaged and at-risk children, and on assessment and accountability to help focus the school's attention on the progress of its most vulnerable learners. The evaluations of Success for All show that a schoolwide focus on prevention and early intervention, on improvement of classroom practice, and on constant, curriculum-based assessment of students and of the program itself can yield significant benefits for children.

We would not suggest that the particular constellation of elements implemented in Success for All is ideal or optimal. In fact, the program itself varies in important ways from site to site, depending on the nature, needs, and resources of each. What is common to all Success for All sites and must become common to Chapter 1 schools as a whole is a relentless focus on the success of all children, a commitment to see that learning problems are prevented as much as possible and are recognized and intensively remediated early on if they do appear. The first line of defense is preschool, kindergarten, and improved classroom practice. If this approach is not enough, tutoring or family support services are brought in, or changes are made in classroom instruction to meet individual needs. If these are not enough, school staff members experiment with other solutions. The commitment is: never give up until a child is succeeding.

Next September another three million confident, eager, and motivated six-year-olds will enter our nation's first grades. The essential goal of Chapter 1 and other compensatory education programs should be to see that all these children leave the primary grades as confident, as eager, and as motivated as when they came in, with the skills they need to make it in the later grades and a well-founded expectation that the rest of their schooling will be as rich and as successful as that which they have experienced so far. Success for All provides one model of a program designed to meet this goal.

Notes

1. These descriptions are adapted from Robert E. Slavin et al., "Success for all: First-year outcomes of a comprehensive plan for reforming urban education," *American Educational Research Journal* 27 (1990), pp. 255–278.

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12. Robert E. Slavin et al., "Neverstreaming: Prevention and early intervention as alternatives to special education," *Journal of Learning Disabilities* 24, no. 6 (June/July 1992): 373–378.

13. Robert E. Slavin and Renee Yampolsky, "Success for all and the language minority student," paper presented at the annual meeting of the American Educational Research Association, Chicago, April 1991.

14. Madden et al., op. cit.

15. Gay Su Pinnell, "Reading recovery: Helping at-risk children to read," *Elementary School Journal* 90 (1989), pp. 161–182.

16. Madden et al., op. cit.

17. Robert E. Slavin, Nancy A. Madden, and Lawrence Dolan, *Success for All at Buckingham Elementary: First-Year Evaluation* (Baltimore: Center for Research on Effective Schooling for Disadvantaged Students, Johns Hopkins University, 1990).

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1-on-1 Instruction Reads Like a Success

by Maria Koklanaris

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The many diversions of an active six-year-old fill most of Bryan Howard's week. Music, karate and remote-control cars are just a few of the Fairfax County first grader's interests.

But for 30 minutes each school day, Bryan, who attends London Towne Elementary school in Centreville [Virginia], forsakes these favorites. At that time, he and his teacher, Judy Roma, shut out the world—except the world found in books.

Bryan is one of nearly 200 pupils in Fairfax County, 370 in the Washington area and 13,000 in this country and Canada who are becoming better readers and writers through a highly intensive one-on-one program called Reading Recovery.

Offered locally to first graders in Fairfax, Arlington and Prince William counties and the District, Reading Recovery is among the best programs available for poor readers, according to educators and parents.

When Bryan began the program, Mrs. Roma said, he knew a few letters and thought pictures were the only parts of books that told a story. But 2½ months later, he is reading simple books fluently, making progress in sounding out words and comprehending what he reads.

"He's such a hard worker," Mrs. Roma says. "He's the kind of kid who hangs in there till the very end."

That hard work is likely to pay off in Bryan's graduation from the program, which means he will be reading at an average or near-average level for his age. And he will be another Reading Recovery success story. In Fairfax, roughly 85 percent of Reading Recovery pupils soon progress to the point where they no longer need special instruction.

Nationally, the success rate is about 80 percent.

Those numbers are why school officials praise Reading Recovery. In an era of falling test scores and rising cries of "Johnny can't read," Reading

Recovery pupils post solid, consistent gains. And the key areas of the program, reading and writing, are two of the crucial basics that some parents, educators and politicians say schools need to get back to.

"Once they leave Reading Recovery, three and four years out, these kids remain [reading at a level] with their class," said Fairfax School Board member Kristen J. Amundson of the Mount Vernon District. "It's a real investment in children. It's not just a quick hit. It really does help kids get the skills and then achieve."

The board reaffirmed its support of Reading Recovery on Dec. 5 when it voted to spend nearly $600,000 to give 15 schools with large numbers of underachieving students a choice of decreasing class sizes in first grade or training more teachers in Reading Recovery.

The vote came after some School Board members balked at spending the money at a time when the schools face a possible multimillion-dollar revenue shortfall, but a majority of members said the program was worth it.

Reading Recovery "is the only program we have" that shows such strong results, Superintendent Robert R. Spillane said.

Developed and tested in New Zealand in the 1960s and 1970s by an educational psychologist named Marie Clay, Reading Recovery involves 16 to 20 weeks of daily instruction that supplements a first grader's regular classroom day. The program is designed to intercept poor readers at an early age, diagnose their problems and correct them before the students become so lost that they need long-term remedial help.

"At first grade, that gap is still small enough that that gap can be closed," says Pat Fege, a coordinator of the program in Fairfax County.

Fairfax tracks achievement of individual students rather than students as a group. But it has conducted one study of 41 children who were in Reading Recovery as first graders in the fall of 1987. Before Reading Recovery, they tested in the 17th percentile for reading, which means 83 percent of their peers did better. After Reading Recovery, they tested in the 44th percentile, moving from the very poor to the low average range.

What officials find more significant, however, is that subsequent testing of the group as third graders found them still in the 44th percentile. They had maintained their gains and required no remedial instruction.

"Fairfax County did a very good job of mounting the program and keeping quality control," Mrs. Clay said in a telephone interview from London, where she is helping British officials set up Reading Recovery in schools. She said the county is among those she tracks.

Teachers say Reading Recovery is an "accelerated" program because they can teach children several components of reading at once. Within one 30-minute session, a child might work on matching letters to sounds, identifying words in sentences, associating words and pictures, and grasping the meaning of what he reads, all at the same time.

Teachers say that when a child learns to apply all these strategies at once, he is truly reading. If one strategy fails him, he can catch himself by using the others.

Teachers learn to recognize each part of the reading process and to understand in which areas of reading the child needs help.

"Once you become a Reading Recovery teacher, you're never the same teacher," says Mary Parish, who oversees the program in Prince William County. "It helps you observe the learner and see what they need next. The better you do that, the better you're able to move the child along. At the same time, you're constantly making sure the child does not become dependent on you."

Reading Recovery teachers work in concert with classroom teachers who refer pupils to the program. Some classroom teachers are even learning elements of the program in a new class on "beginning reading strategies." They can use what they learn to help Reading Recovery pupils as well as others who are experiencing some difficulty in reading and writing.

Fairfax County is also conducting a pilot program in three schools that is designed to improve coordination between Reading Recovery teachers and classroom teachers. Two teachers share a first-grade classroom in each school. One teacher spends the morning in class while the other does Reading Recovery. In the afternoon, they switch. Through the day they advise each other on pupil progress.

Reading Recovery, now offered in 18 states and the District, was first seen in this country in 1984. After successes in New Zealand, Mrs. Clay chose the United States and Australia as the next countries in which to try her program.

The American launching pad was Ohio State University, which started a partnership with the Columbus public schools. Chip Nilges, an administrative assistant for Reading Recovery at Ohio State, said Ohio officials were sold on the program after 74 percent of children involved in Reading Recovery in its first full year achieved an average or near-average reading level.

Word about Reading Recovery spread rapidly among American educators, many of whom attended lectures by Mrs. Clay. One of them was Gloria McDonnell, a Fairfax reading specialist who is now director of elementary instruction for the county.

Mrs. McDonnell, a longtime follower of Mrs. Clay's research, was impressed by the possibilities Reading Recovery presented. She persuaded her supervisors, who then persuaded Mr. Spillane and the School Board to launch the program.

"There was a sufficient amount of data already" showing that the program worked, Mrs. McDonnell said.

In 1985, the county sent teacher Nancy DeCou-Johnson on a one-year sabbatical to Ohio State, where she received training as a Reading Recovery teacher-leader. Teacher-leaders train their peers to instruct children in Reading Recovery. In 1986, Fairfax County became the first U.S. school district outside Ohio to implement Reading Recovery.

Soon, Arlington and Prince William counties and the District took notice. In 1989, Arlington offered the program in three schools and Prince William in four. The District began it this year in 26 schools.

Already parents have noticed results, said Sylvia Sanders, the District's site coordinator for Reading Recovery.

"Many of [the Reading Recovery children] now want to read," Ms. Sanders said. "Parents are just elated."

Like Prince William and Arlington, the District has received much advice from officials in Fairfax, where 41 schools teach children Reading Recovery.

The county is expanding the program by acquiring two more teacher-leaders, one who is now training at the University of Illinois and one who will be hired next semester. They will work with Mrs. DeCou-Johnson to instruct more teachers, who can then be assigned to schools without Reading Recovery.

It is unlikely, however, that the program will ever be implemented countywide.

"I don't believe that every school in Fairfax County needs Reading Recovery," Mrs. McDonnell said. "Reading Recovery should be reserved for those students who are at the bottom."

School districts may use Chapter 1 money to pay for books and other materials and may buy extra books out of their own budgets. Some districts use Chapter 1 to pay for teacher training; others, including Fairfax, pay for it themselves.

In Fairfax, Reading Recovery training is funded from the same office that pays for teachers to advance their educations. Reading Recovery training is considered professional development and counts for six hours of university credit.

The class, offered this year to 15 teachers, costs the county $8,544, or about $570 per teacher. Materials, funded partly by the county and partly by Chapter 1, cost $1,180 per teacher. That includes teacher guidebooks, student reading books, replacement books and other supplies.

Fairfax County officials, as well as those in other jurisdictions, say the cost is well worth it. Because Reading Recovery children maintain their learning gains, officials believe they save money by reducing the number of children who would have to be placed in remedial classes later. They also believe they spare more children from failing.

"If a youngster is unable to read," said School Board member Anthony Cardinale of Springfield, "he cannot be a student." ◀

Effective Instructional Strategies

Can I Make a Difference? Teacher Efficacy in the Classroom

by Dr. George P. Barker

Reprinted with permission from *Instructional Leader* (October 1991).

The difficulties of teaching and the daily obstacles teachers must overcome in educating our youth are plentiful. Educators are constantly notifying the public, "My class size is too large," "I don't get support from my principal or from the parents of my students," "My students come from impoverished homes," "My textbooks are outdated." These are just some of the reasons given as to why it is so difficult to make a difference in the classroom.

Attribution research clearly demonstrates that all of us have a tendency to take credit for success and not be responsible for failure, "We won, they lost."[1] By doing this we maintain our self-esteem, self-concept of ability and ego strength. Therefore, it is understandable that when students are failing or are unresponsive to instruction, it is tempting for teachers to blame anything but themselves for lack of success.

- "The students are not paying attention—it must be a windy day outside."
- "The students are not learning—they must have low I.Q.'s."
- "The parents are not involved—they must not care."

Sometimes these reasons may be true, but one outcome of constantly looking to outside factors to explain failure is that "learned helplessness" may be developed by teachers.

The concept of "Learned Helplessness" was introduced by Mair et al.[2] and Seligman[3] to explain the response of animals and humans when exposed to a number of tasks in which they are unable to influence the outcome. It is the

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perception that no matter what one does, one is doomed to fail: "Nothing I do matters."

When people learn there is no relationship between what they do and their ability to impact the situation or reach their goal, they give up and respond passively. Learned helplessness leads to lowered self-esteem, reduced persistence, deterioration in performance, lethargy and a non-willingness to exert effort. People feel impotent and become a "pawn" of their environment.[4] Although we typically discuss learned helplessness as it occurs with students, the same phenomenon certainly must exist with teachers. If a teacher has a choice of trying and failing or not trying and failing, the latter alternative will most certainly be selected.

School districts, using staff development moneys, often bring in "motivational" speakers at the beginning of the school year to excite and provide teachers with feelings of potency to "go forth and educate." These speeches usually are filled with jokes and inspirational stories to touch the feelings of educators. Rarely are these admonitions accompanied by substantive skills or knowledge which will empower the teachers to make their daily instruction more successful. This "upbeat" sermon approach usually lasts for a few hours or days. Then teachers return to feelings of helplessness and "What can **I** do?"

One reason that so many staff development programs have risen in popularity over the last decade is that they have substantive content which empowers teachers with usable skills. Cooperative Learning, Mastery Teaching (ITIP/EEI), TESA and Assertive Discipline are a few of the many popular topics of staff development being adopted by educational agencies in the last two decades. Whether you agree or disagree with these programs in part or in their entirety, one thing is for sure, these programs have given many teachers a feeling of empowerment and equipped them with skills that enable teachers to **perceive** that they can make a difference, a feeling they previously may not have had.

It is this feeling or perception of self-efficacy that is critical. "If I think I **can** make a difference, I might. If I think I **can't**, I'm right!" Skills and training are not enough. One must have the belief that with the learned skills you can bring it off. We might also want to use some of the same techniques teachers can use on children who have developed "learned helplessness,"[5] and use them on teachers. In doing this, not only will teachers become more competent, more importantly they will realize their competence. As administrators, supervisors or peer coaches, we may want to consider the following:

1. Change General Reinforcers So They Focus on Performance Behaviors

Rather than "good work," "excellent lesson," identify productive behaviors, such as: "When you told the boy you would meet him after class to discuss the disruption he caused, you communicated to him and the class that you were not going to take up valuable class time to deal with it, but there were going to be consequences."

By focusing on teaching behaviors, we are sending a clear message to teachers that professional success is linked to skills that, with effort, can be learned.

2. Link Teacher Behaviors to Outcomes

"Your selection of these cooperative groups was excellent as evidenced by their participation and performance."

"Your students learned probability well because you carefully task-analyzed the skills to be learned and did not teach the next learning until you had checked to see they knew the requisite skills."

The message to teachers is that **your** skills are having a dramatic and positive effect on students. By helping teachers identify the accomplishments their teaching has caused and to recognize their power, they will be more likely to look to their behaviors to explain success and failure.

3. Provide Encouragement

Because all teachers have experienced occasional failure, some are reluctant even to attempt tasks they are capable of performing. Encourage teachers to work on curriculum, write educational articles, join mentor programs and take student teachers into their classrooms. We then need to structure such programs and activities so teachers' efforts pay off. Often teachers are encouraged to engage in professional growth activities but are not given the resources/assistance nor skills to achieve success, thereby leaving teachers with an unwillingness to attempt future opportunities to improve.

4. Encourage Teachers to Take Responsibility for Their Success and Label What They Are Doing to Achieve This Success

"Your students are learning so much because of the way you are structuring your class. What are some of the things you think about before or while you are teaching to create this success?"

We need to continue to remind teachers that they are the most significant variable in the classroom.

5. Encourage Teachers to Examine Responsibility for Their Failures and Identify Alternative Actions That Could Have Been Taken to Increase The Probability of Success

When student failure is preventable, we do not want teachers taking refuge in the non-alterable variables of pupil/teacher ratio, school facilities, or textbooks. We want teachers to recognize that, yes, some of these factors may be contributing to student failure but the only factor that **I** directly control is **my** teaching. Only by exerting **my** skills will **I** make a difference in student success.

"Your students seem to be having a difficult time understanding the concept of photosynthesis. Let's look at some things you might try to enable students to understand this learning."

If the teacher cannot think of alternative behaviors, the supervisor (coach) should be prepared to support and provide alternatives. For example you could say:

"One thing you may want to consider is presenting the information in small, incremental steps to make sure the students know that before going to the next concept."

6. Teach Teachers to Use Procedures and Techniques to Monitor Their Students' Gains and Achievements

By having teachers check for understanding more often, assess learning gains in cooperative groups, and keep records of declines in disciplinary problems, teachers can provide themselves with feedback on how they are succeeding. We all need to know how we are doing to enable us to continue with our present approach or change and adapt to the situation so we can succeed in the future.

In summary, we want to help teachers recognize that "(E) events + (R) their response to those events = (O) outcomes."[6] That is, based on the events that are presented to teachers, their assumption of responsibility for success and the effort they are willing to exert will result in the outcomes that occur. The debilitating attributional pattern of the realization that "no matter what I do, I will fail" can be changed in children **and teachers**. To help empower teachers with the skills of current research-based staff development programs, as well as the knowledge that teachers can make a difference, will most certainly help teachers realize that they are the "origins" of student success, not the "pawns" of their environment,[7] potent not impotent. Can **I** make a difference? If I think **I** can, I might!

Notes

1. B. Weiner, "A theory of motivation for some classroom experiences," *Journal of Educational Psychology* 71 (1979), 3–25.

2. S.F. Mair, M.E.P. Seligman, and R.L. Soloman, "Pavlovian fear conditioning and learned helplessness," in B. Campbell and R. Church, eds., *Punishment and Aversive Control* (New York: Appleton-Century-Crofts, 1969).

3. M.E.P. Seligman, *Helplessness: On Depression, Development and Death* (San Francisco: W.H. Freeman, 1975).

4. R. de Charms, *Personal Causation* (Academic Press, 1968).

5. C. Bos, and S. Vaughn, *Strategies for Teaching Students with Learning and Behavior Problems* (Boston: Allyn and Bacon, 1988), pp. 262–263.

6. J. Canfield, "Improving student self-esteem," *Educational Leadership* 48 (September 1990), 48–50.

7. de Charms, op. cit. ◄

Classroom Management and Instructional Strategies for the Disadvantaged Learner: Some Thoughts about the Nature of the Problem

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I bring to the task of writing this paper a firm belief that we know most of what we need to know about *formal teaching and learning* in classrooms to help disadvantaged children achieve in school. I am, therefore, impatient at the thought of yet another study; uncertain that one more investigation of instruction and management practices will yield knowledge worthy of the time, effort, and expense. My stance is not anti-intellectual nor anti-inquiry. It is a function of my fear that as an educational community we are stalling; that we have knowledge and skill that we are not willing to act on because it would be difficult to do so. Or that we have knowledge that does not connect readily with policy; knowledge that might suggest changes that are beyond our political will as a nation.

We know, for example, that intelligent, well-educated teachers contribute to student learning. And it is no secret that cities, rural areas, and other areas that include large proportions of poor and minority children have difficulty recruiting and keeping what we consider our most talented teachers. Nor is it a secret that youngsters in these schools often pose educational and emotional challenges that teachers feel ill-prepared to handle and that lead them to cope by emphasizing lower-order skills and classroom control at the expense of education. A great part of the solution to poor academic achievement is better-quality teaching through better-educated teachers.[1] For the higher-order thinking skills and complex subject matter understanding we truly desire, *different* as well as better teaching is in order (Cohen, 1988). It is not clear, however, how we can translate this knowledge into practice.

I do not make the judgment about teaching quality solely on the basis of published research, although there is sufficient documentation with which to make that argument (Doyle, 1986, among others). It is a conclusion based on formal and informal observation in classrooms over the past five years and memories of my own teaching in the South Bronx and in New Haven in the late 1960s and early 1970s. I retain vivid images of dull classrooms, scenes of children and adults trying hard and getting nowhere meaningful. Frustration was a daily fact of life for teachers and children.

When I taught, basal reading groups, language experience charts, the Chandler and Bank Street reading series, individualized reading with trade books, and SRA came and went without impact on children's achievement. The principals (there were four of them in our school of 1,800 children) made sure that we planned for instruction in all required subject areas by collecting planbooks weekly and by requiring a schedule that delineated how we allocated the instructional time available (1,550 minutes, as I recall) to various subjects. If they walked into a class at 10:30 on Tuesday, they could expect to see a social studies lesson in progress if that's what a teacher's time allocation plan described. Many classrooms were orderly; but few children or teachers got excited about and by learning. Standardized test scores were very low. In highly organized classrooms with caring teachers, achievement was dismal.

When I returned to inner-city elementary school classrooms in a number of states as a researcher several years ago, I was struck by how little had changed in the organization of schools, classrooms, and instruction. Teachers were still being asked to keep track of the minutes they spent on instruction in the various subject areas (only now it was part of a reform, not standard operating procedure). Textbooks were curriculum. Fragmentation and routinization—control strategies—were once again the latest route to the improvement of education for disadvantaged youngsters.

As a participant observer I experienced Madeline Hunter's approach to teaching through a five-day staff development program expertly delivered by Rob Hunter. Teachers applauded what they were learning and worked hard to implement the recommended teaching strategies into their repertoire of skills. When it was over, in classroom after classroom in states as different as Connecticut and Texas, teachers were saying "I like the way Tyrone is sitting," as they strove to have others follow suit. Advance organizers, objectives stated on the board, guided and independent practice in strict, undeviating order characterized classrooms. Careful organization through a standard lesson design, teacher-controlled use of time, central office control of curriculum coverage, pacing, and assessment characterized the classrooms I saw and those described by colleagues. Joy, creativity, and success, even on these limited terms, were rare commodities.

Lack of subject-matter knowledge in mathematics and science, in particular, characterized far too much of the teaching that I saw. Teachers implemented well-organized math lessons dealing with division of fractions without clearly understanding the concepts themselves. Children made mistakes that revealed where they misunderstood concepts; teachers failed to notice the thinking behind the mistakes so they did not use children's errors to re-teach or teach differently the material under consideration. The form of lessons was as required by the latest staff development expert; content and meaning were often lacking. Children were remembering bits and pieces of information and computational strategies, some of which led to improved standardized test scores, some of which were wrong. Students wrote compositions that were pinned to bulletin boards so that they could be proud of their creative work—a testament to positive reinforcement. All of them were on the same assigned, narrow topics, such as "my favorite food," or "our trip to the newspaper." What were children learning from these lessons? What would they find compelling, I wondered, about the possibilities of learning from the opportunities they had in school? What did all of this effort, motion, and good intention have to do with education? What did we want children to be able to know and do at the end of this kind of educational experience? Why did educators think this new order was an improvement?

Just as we know that we need teachers who know their subject matter and how to teach it, we also know that organization, focus, and good use of time are important. But the valuable nuggets of information and skill that are embedded in the recent research on teaching have been transformed into the time and motion routines of schools. More than other reform efforts—open classrooms and progressive education ideas, in particular—the most recent strategies for improved teaching fall into the mainstream patterns already in place. As such, their weak points are exaggerated by the extant system. They have been turned into mechanical, standardized practices that fit well into our factory model of schooling. Far from providing teachers with a knowledge base that can underpin a professional practice of teaching, as used in too many elementary schools for disadvantaged children, they substitute form for thought.

Both Doyle and Brophy are far more knowledgeable than I about this research, its application in practice, and the likely implications of that practice for important, meaningful student learning. So, having made my brief remarks about my biases and the problems associated with what have been the mainstream responses to improving teaching and learning for disadvantaged learner, I leave that body of research and practice to raise some other issues that are intimately related to students' ability to learn in schools, but which remain out of mainstream efforts to improve students' achievement. In mentioning these, I am not minimizing the need for intelligent, well-educated teachers who know their subject matter and know how to teach it with pedagogics that go beyond the fragmented, decontextualized effective teaching strategies. I am choosing to focus elsewhere because there are additional, critical issues that have direct bearing on academic achievement and the impact of academic instruction, which are usually treated as tangential to instruction, or as merely providing difficult conditions under which instruction and learning must proceed. I want to suggest that these factors might well be thought of as integral to learning; that they may contribute far more to learning outcomes than does the choice of a particular instructional strategy. As such, they are important to the study of academic achievement for disadvantaged children.

I want to bring to the forefront of this SRI study ideas about (1) cultural differences (Erickson, 1986, 1987; Delpit, 1986, 1988; Au & Jordan, 1980; Rodriguez, 1982), (2) the influence of the "caste-like" status of black and some Spanish-speaking people (Fordham, 1988; Ogbu, 1987), and (3) the social distance between the culture of the home and the school (Comer, 1980a, 1986, 1988a & b) as factors with a profound influence on academic learning, as factors that ought to be included as central to any study of academic instruction for the disadvantaged. I will do this by talking briefly about the emotional cost of "making it" in mainstream schools if one is a member of a "caste-like" minority, the kinds of cultural differences that can interfere with learning, and the developmental differences between some minority and mainstream children when they enter school. Then I will highlight the School Development Program in New Haven to suggest school changes that can facilitate student learning by responding to children's social, developmental, and educational needs through a decentralized governance structure.

Cultural Differences/Differences in Status

A growing number of academicians and practitioners are paying attention to the dilemmas that face disadvantaged children because they come to school well entwined into a community that they value and that is different from the mainstream community that structures educational settings and interactions (Delpit, 1988; Comer, 1980a & b, 1988a & b; Fordham, 1988; and Ogbu, 1987). In the case of black and Hispanic children, that community may not share with the mainstream community the view that schooling is an avenue to economic and social success. Ogbu (1987) explains that years of oppression and lack of access to mainstream institutions have led black and some Hispanic people to develop a culture that operates *in opposition* to the white culture. Accepting school, a prime mainstream institution, would be in conflict with maintaining the distinct, separate, and oppositional black community. Others (Erickson, 1986, 1987, and Comer, 1980a & b, 1988a & b) stress the cultural differences that exist between minority children and the mainstream culture rather than the accumulated impact of years of skewed power relations that have kept minority families in a subservient position. They point out (1) the difficulties that minority children have making sense of what is demanded of them in schools, (2) the negative impact of their lack of understanding on the adults in the schools, and (3) the lack of skill at home to help them bridge the differences.

Whichever the explanation, and it is feasible that both are correct for communities as diverse as the black and Hispanic communities, children find themselves in an organization which they do not understand well, which is not much like home in the interactional patterns and values that prevail, and which aims to prepare them for a world they do not feel is or can be theirs. It is a world in which they frequently do not succeed from the outset.

As early as age eight, at the developmental stage when they are decreasing their dependence on adults, disadvantaged minority children begin to attend to differences between themselves and the mainstream and they become more aware of their inability to succeed well at school tasks. Their separation from dependence on adults includes separation from the adults at school and the goals of academic success which they see as both unattainable and inappropriate (Comer, 1988a). Even at that young age, were they to choose to succeed in school, the choice would "[exact] a high price: such a choice means rejecting the culture of one's parents and social group" (Comer, 1988a, p. 46). No one should expect any child to choose school given these stakes.

Fordham describes the similar quandary in which older black students find themselves. She describes how they come to associate their future with that of their group and the mismatch between the group orientation of their community and the individual orientation of the school:

> Black children learn the meaning of fictive kinship from their parents and peers while they are growing up. It appears, moreover, that they learn it early enough, and well enough, so that they even tend to associate their life chances and "success" potential with those of their peers and other members of the community. The collective ethos of the fictive-kinship system is challenged by the individual ethos of the dominant culture when the children enter school, and when the children experience the competition between the two for their loyalty. For many Black adolescents, therefore, the mere act of attending school is evidence of either a conscious or unconscious rejection of the indigenous Black American culture. (Fordham, 1988, p. 57)

Using the words of three female and three male students who have chosen to be successful in school, Fordham describes their solution to the dilemma posed by choice. Becoming "raceless" is one strategy with which academically successful minority students use to accomplish and then cope with their success. Fordham writes:

> . . . high [Black] achievers often make choices that either put social distance between them and their peers or undermine group solidarity. They do not appear to believe—nor does their experience support—the idea that they can truly be bicultural and actualize what Edwards (1987) describes as their "crossover dreams"—the widely touted dreams of wealth, fame, and fortune. Instead, their experiences, both in and out of school, support the value of

> appearing raceless to their teachers and other adults in the school context;...both male and female students...believe that school and schooling are the primary means of achieving vertical mobility for Black Americans in the existing social system. (Fordham, 1988, pp. 79–80)

She suggests that this is a pragmatic strategy but one that pits the student and individual mobility against the collective good of the black community as a cultural group. Students' words movingly describe the cost of their choices.

Rodriguez (1982), in his autobiographical account of the process and impact of becoming successful in school, approaches the same difficult choices from a different angle. He talks about the uses of language and the jarring differences between the private language of home and the public language of the school for the Spanish-speaking disadvantaged child. His comments are reminiscent of the trying experiences of many generations of immigrants who chose to join the mainstream:

> ...there is something called bilingual education—a scheme proposed in the late 1960s by Hispanic-American social activists... It is a program that seeks to permit non-English-speaking children, many from lower class homes, to use their family language as the language of school.... I hear them and am forced to say no: It is not possible for a child—any child—ever to use his family's language in school. Not to understand this is to misunderstand the public uses of schooling and to trivialize the nature of intimate life—a family's "language." (Rodriguez, 1982, pp. 11–12)

Each of these individuals argues that, in one way or another, there is a high social and personal price to pay for adopting the mainstream habits and values that make it possible to succeed in school and beyond. They suggest that students are not merely passive recipients of teachers' pedagogical strategies, but rather are active participants in decisions about learning.

These analyses suggest strongly that to consider academic instruction and classroom management as if they were mere technical issues, as if they were about ways of controlling students who do not know how to behave in school or who lack the intellectual wit to deal with complexity, is to miss something essential about the emotional, affective, wrenching experience and hard choices that disadvantaged children face alone every day. To separate academic instruction from its social, contextual component is to seek improvements based on at least a partial misconstrual of the problem.

> *A primary reason for my success in the classroom was that I couldn't forget that schooling was changing me and separating me from the life I enjoyed before becoming a student.* (Emphasis in the original.) That simple realization! For years I never spoke to anyone about it. Never mentioned a thing to my family or my

> teachers or classmates. From a very early age, I understood enough, just enough about my classroom experiences to keep what I knew repressed, hidden beneath layers of embarrassment. Not until my last months as a graduate student, nearly 30 years old, was it possible for me to think much about the reasons for my academic success. Only then. At the end of my schooling, I needed to determine how far I had moved from my past. The adult finally confronted, and now must publicly say, what the child shuddered from knowing and could never admit to himself or to those many faces that smiled at his every success. (Rodriguez, 1982, p. 45)

Some might argue that what Comer, Rodriguez, and Fordham describe has been the case for all minorities, that previous generations of immigrants did indeed have to give up their native language and aspects of their culture in order to make it in America. Certainly generations of children did just this and did it with their parents' encouragement. It was not without pain, for parents or for children. What is different for the disadvantaged today, especially those who are Native American, black, and/or Spanish-speaking, is their enduring low social status in the nation, a situation over which they have had little control, little ability to change. Rodriguez (1982) talks about having to have a public language and a public identity. He had a vision of the possibility of a valued public identity if he gave up his private one. For too many of the disadvantaged, the possibility of a valued public identity still seems like a pipe dream. Thus, there is no compensation in sight for what they will surrender by assuming the public life and values of the school. Or so they think.

Rodriguez also points out the importance of his parents' assent to his learning English. They sanctioned his adoption of the mainstream by agreeing to use English at home. That connection between home and school, the authority of the school and teachers, seems rare today. Comer (1988c) tells the story of a first grader who listened to his teacher tell of the class rules on the first day of school and then raised his hand to say that his mother had told him he did not have to do anything the teacher told him! Parents' responses can make it even more difficult for children to be successful in school.

Rodriguez and Fordham describe children who saw what was required and had the personal qualities necessary to make difficult decisions. They saw what they had to do and they were able to take advantage of what the school had to offer. They are a minority within a minority. Countless other students see what is required and choose not to make the sacrifice; even more probably do not understand the situation they are in and the choices that are available.

There are children who are failing to learn because the interaction patterns required of structured lessons are at odds with those required of their home culture and, for one reason or another, they cannot figure out what is required by the teacher. The Kamehameha Early Education Project (KEEP) in

Hawaii is cited frequently as an example of how correction of a cultural mismatch in interaction style had a profound impact on students' ability to learn to read in first grade (Erickson, 1986, 1987; Au & Jordan, 1980). Adjustments in permissible speech patterns and turn-taking enabled children to use existing material to learn to read with no change in the reading materials. There are other examples of cultural mismatches whose correction led to important achievement increases.

One can look at KEEP as an elegant, parsimonious intervention that makes it possible for children to learn to read and maintain their culture. However, those for whom education is acceptance of the oppressor's culture may not find such shifts beneficial. Rodriguez' insight into the fundamental nature of education—that it changes people and takes them from the private to the public domain—is still going to be an issue for those who want to become a part of the economic mainstream and simultaneously remain within the private, cultural enclave. It will be more of an issue for those whose identity is connected to not being part of the economic and social mainstream.

Finally, the instructional lesson of KEEP is not that basal readers are the best way to teach reading, but rather that whatever pedagogics teachers choose, they must be sensitive to the match and mismatch between the instructional demands and the normal interaction patterns of the children in the classroom. If KEEP had been trying to implement a trade book approach to reading, it might have looked for interference from other aspects of children's normal interaction patterns, not only those that were important given the structure of "reading groups." Efforts to make interaction patterns explicit and provide a way for children to use what they know as well as broaden their repertoire of skills in order to have access to the academic curriculum of the school might be characteristic of some effective instructional strategies. Delpit asks that schools teach children "the content that other families from a different cultural orientation provide at home…ensuring that each classroom incorporate strategies appropriate for all the children in its confines" (1988, p. 286). Some of that content will be mainstream interaction patterns.

Developmentally Responsive School Organization

James Comer argues explicitly for the school to take on the roles of teaching mainstream social interaction skills to disadvantaged children and helping to build strong connections between the school and the home. Through the School Development Program, a school improvement strategy that uses child development and mental health concepts to orient the actions and activities of school faculty and staff through the locally constituted School Governance and Management Team (SGMT) and the Mental Health Team (MHT), he involves parents "so that they can support the kids even though [those kids are] growing away from the style and experience of the parents" (1986).[2]

For the last 20 years, James Comer (1980b) has worked from a set of assumptions about what influences the academic and social success and failure of minority disadvantaged children, arguing that primary attention to the technical aspects of teaching and learning ignores significant features of learning encounters that are essential for success. Learning, he asserts, takes place in relationships. He diagnoses school failure as related to the failure of personal relations between children and adults in school (a failure that is not always intentional) and argues for a parental role for teachers:

> The effort to limit the role of the teacher and the school to academics is one of the primary reasons America's great experiment in education—the effort to educate more than the intellectual elite and economically privileged—has been less successful than it might have been. (Comer, 1988b, p. 34)
>
> ...by focusing solely on academic changes, the schools have ignored the affective domain—the crucial relationships that students need to grow and learn. We remain mired in a mechanical approach to learning. It's one that has never served our children well—and in today's world dooms many of our students to failure. (Comer, 1988b, p. 39)

Comer urges attention to child development, to affective aspects of learning, to the relationships in which learning occurs, and to the need "for teachers and school people to again serve as parent surrogates." Comer's suggestion for improving academic achievement is the reorganization of schools so that their faculties can support the social and emotional growth of students "and in turn, academic learning" (Comer, 1988b). (Lipsitz [1984] makes a similar point with respect to middle schools.) He argues that "the failure to bridge the social and cultural gap between home and school may lie at the root of the poor academic performance of many of the [poor, minority, disadvantaged] children" (Comer, 1988a).

Comer talks about the differences in development and values that occur particularly in poor, marginal black families that lead their children to arrive at school without the mainstream values and social skills, for example, skills of negotiation and compromise, that they will encounter and need there. He writes:

> Such lack of development or development that is at odds with the mainstream occurs disproportionately often among children from the minority groups that have had the most traumatic experiences in this society: Native Americans, Hispanics and blacks. The religious, political, economic and social institutions that had organized and stabilized their communities have suffered severe discontinuity and destruction. Furthermore, these groups have been excluded from educational, economic and political opportunity. (Comer, 1988a, p. 45)

He believes schools should explicitly teach children what they need to know and that such instruction can be good education. He, his colleagues, and parents developed a social skills curriculum that embeds social skills in the context of subjects that children need to know: "politics and government, business and economics, health and nutrition, and spiritual and leisure activity." In this program:

> Children learned how to write invitations and thank-you notes, how to serve as hosts, how the body functions, how to write checks, how to plan concerts, and so on. Each activity combined basic academic skills with social skills and an appreciation of the arts. These activities were an immediate and dramatic success. (Comer, 1988a, p. 48)

Readers may disagree with Comer's acceptance of the mainstream culture and the power relationships implicit and explicit in teaching children to fit into it (1980a). His argument is that while schools are mainstream organizations and while access to the mainstream of America requires school success, teaching children explicitly what they need to know in order to succeed is a sensible strategy. And teaching children these social skills has been accompanied by reduced tensions in schools and significant increases in academic achievement that have been sustained over time. This strategy may be related to Delpit's (1988, p. 283) comment regarding "the culture of power," in which she states "If you are not already a participant in the culture of power, being told explicitly the rules of that culture makes acquiring power easier." The School Development Program aims to make the rules explicit.

Chubb's (1988) work in a broader array of secondary schools supports Comer's view of the importance of effective school organization and parental involvement for student achievement. While school practices—graduation requirements, homework assignments, emphasis on writing, and effective disciplinary practices—"yielded only the slightest improvements in achievement," organizational qualities that led faculty to talk about the school as if it were a family and parental involvement were associated with better academic achievement. "The largest estimated influence on the effectiveness of school organization is the role of parents in the school. All other things being equal, schools in which parents are highly involved, cooperative, and well-informed are more likely to develop effective organizations than are schools in which parents do not possess these qualities." The second most important determinant of school organization, and therefore effectiveness, was the influence of administrative superiors over policy and personnel. Schools worked better as organizations when the principal was powerful relative to the superintendent and other central office personnel. One might question the cause and effect relationship in these findings, something that Chubb does not address in this paper. However, Comer's work in New Haven, because it was an intervention, sheds light on the question. He *created* (among other things) greater parent involvement and one result was a climate in which improved academic success was an outcome.

Conclusion

Suppose we already know all we need to know about the technical aspects of instruction for disadvantaged learners. Suppose that we have gone as far as we can in describing the discrete features of direct instruction, wait time, higher-order questions, classroom organization, for example, that make a difference to learning. Suppose that we have exhausted the possibilities for examining fragments of teaching acts and associating them with specific learning outcomes in children. If this were the case, what would we hope to gain from yet another study of classroom management and instructional strategies for the disadvantaged learner? What else would we need to know about the change from the intended to the enacted to the received curriculum? Certainly, we do not need another study of fidelity of implementation. Nor will it help us to know that teachers are street level bureaucrats who must apply broad policies—curriculum and acceptable teaching techniques—to their unique settings under conditions of uncertainty. We know quite a lot about the importance of teachers who are reasonably organized about instruction and who can maneuver between a variety of teaching strategies depending on the material under consideration and the students who are attempting to learn it. We know about individual differences and the dilemmas of heterogeneous classrooms whatever the dimensions of the heterogeneity. And we know about problems associated with diversity and quality in the faculties that teach in inner-city and poor rural schools. These critically important, but nonattractive teaching positions do not draw or retain the best of our teaching force.

But somehow, through all of our research and efforts to improve education for the disadvantaged, we have had only minimal success. Over the last 20 or so years, we have learned a great deal about teaching and learning, tried a number of innovations in curriculum and instruction, and yet, despite some small progress, we have reaped too little for our efforts. Maybe what we have learned is necessary but not sufficient.

Without disregarding the contribution of the large body of research on classroom management and instruction, I have taken this opportunity to raise the possibility that we ought to look for characteristics, criteria, and models of management and instruction for academic subjects in nontraditional places, that is, in the improvement of the interpersonal relations between students and teachers, between home, students and school, and in the social interaction skills necessary for success in school for children who, for one reason or another, do not come to school with them. Perhaps we ought to remind ourselves that learning is fundamentally accomplished in the context of relationships. Most teaching and school effectiveness/improvement efforts are based on input/output models that tend to construe teaching and learning as primarily technical tasks that involve, for example, matching appropriately organized material with the right teaching techniques. Grounded in reinforcement and learning theory, these more common approaches aim to set up conditions that increase the probability of learning. They have not always paid much attention to what was happening in the learner's mind as a result of the social context in addition to the instructional strategy. What I have tried to insert into our thinking about improvement of education for the disadvantaged is the idea that children are actively constructing the world of school in which they spend their time and that the interpersonal relationships in schools and between homes and schools must be healthier before improvements in teaching and learning can occur; that what mediates between the stimulus and the response—the interpersonal and social relationship as well as the teacher's skill and knowledge—is fundamental to the enterprise, to the probability that learning will occur.

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Notes

1. When I speak of the need for better-quality teaching I refer to the quality of (a) the content under consideration, (b) the organization of learning opportunities, (c) the pedagogical strategies in use, and (d) the affective component of personal interactions between teachers and learners.

2. The MHT and SGMT have distinct and significant roles in the SDP. Rather than summarize them, I quote from the Program Description (Comer, 1986).

a. The Mental Health Team

- works with the governance and management body [formerly the SPMT] to enable it to base its academic, social climate, and staff development programs on mental health, child development principles;
- facilitates the many interactions between parents and school staff to improve the social climate and cooperation throughout the school community;
- works with classroom teachers and parents to identify children who need special services;
- sets up individualized programs for children with special needs, using the school's special education facilities and staff and other school-based or outside services as needed;
- works with classroom teachers to develop classroom strategies to prevent minor problems from becoming major;
- offers ongoing consultation to all school staff to bridge the gap between special education and general classroom activities;
- provides consultation and training workshops to staff and parents on child development, human relations, and other mental health issues.

b. The School Governance and Management Body [SPMT]. The school governance and management body includes the school principal, a mental health team member, and representatives selected by teachers and parents. This group:

- meets on a regular basis to carry out systematic school planning, resource assessment and mobilization, program implementation, and program evaluation and modification;
- establishes policy guidelines in all aspects of the school program—academic, social, and staff development;
- works closely with the parent group to plan an annual school calendar to integrate social, academic, and staff development functions;
- works to facilitate social skill development and academic learning.

Synthesis of Research on Cooperative Learning

by Robert E. Slavin

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■ *The use of cooperative learning strategies results in improvements both in the achievement of students and in the quality of their interpersonal relationships.*

There was once a time when it was taken for granted that a quiet class was a learning class, when principals walked down the hall expecting to be able to hear a pin drop. Today, however, many schools are using programs that foster the hum of voices in classrooms. These programs, called *cooperative learning*, encourage students to discuss, debate, disagree, and ultimately to teach one another.

Cooperative learning has been suggested as the solution for an astonishing array of educational problems: it is often cited as a means of emphasizing thinking skills and increasing higher-order learning; as an alternative to ability grouping, remediation, or special education; as a means of improving race relations and acceptance of mainstreamed students; and as a way to prepare students for an increasingly collaborative work force. How many of these claims are justified? What effects do the various cooperative learning methods have on student achievement and other outcomes? Which forms of cooperative learning are most effective, and what components must be in place for cooperative learning to work?

To answer these questions, I've synthesized in this article the findings of studies of cooperative learning in elementary and secondary schools that have compared cooperative learning to traditionally taught control groups studying the same objectives over a period of at least four weeks (and up to a full school year or more). Here I present a brief summary of the effects of cooperative

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learning on achievement and noncognitive outcomes; for a more extensive review, see *Cooperative Learning: Theory, Research, and Practice* (Slavin 1990).

Highlights of Research on Cooperative Learning

In cooperative learning, students work in small groups to help one another master academic material. There are many quite different forms of cooperative learning, and the effectiveness of cooperative learning (particularly for achievement outcomes) depends on the particular approach used.

- For enhancing student achievement, the most successful approaches have incorporated two key elements: group goals and individual accountability. That is, groups are rewarded based on the individual learning of all group members.
- When group goals and individual accountability are used, achievement effects of cooperative learning are consistently positive; 37 of 44 experimental/control comparisons of at least four weeks' duration have found significantly positive effects, and none have favored traditional methods.
- Achievement effects of cooperative learning have been found to about the same degree at all grade levels (2–12), in all major subjects, and in urban, rural, and suburban schools. Effects are equally positive for high, average, and low achievers.
- Positive effects of cooperative learning have been consistently found on such diverse outcomes as self-esteem, intergroup relations, acceptance of academically handicapped students, attitudes toward school, and ability to work cooperatively.

—Robert E. Slavin

Cooperative Learning Methods

There are many quite different forms of cooperative learning, but all of them involve having students work in small groups or teams to help one another learn academic material. Cooperative learning usually supplements the teacher's instruction by giving students an opportunity to discuss information or practice skills originally presented by the teacher; sometimes cooperative methods require students to find or discover information on their own. Cooperative learning has been used—and investigated—in every imaginable subject in grades 2–12, and is increasingly used in college.

Small-scale laboratory research on cooperation dates back to the 1920s (see Deutsch 1949; Slavin 1977a); research on specific applications of cooperative learning to the classroom began in the early 1970s. At that time, four research groups, one in Israel and three in the U.S., began independently to develop and study cooperative learning methods in classroom settings.

Now researchers all over the world are studying practical applications of cooperative learning principles, and many cooperative learning methods have been evaluated in one or more experimental/control comparisons. The best evaluated of the cooperative models are described below (adapted from Slavin 1990). These include four Student Team Learning variations, Jigsaw, Learning Together, and Group Investigation.

Student Team Learning—Student Team Learning (STL) techniques were developed and researched at Johns Hopkins University. More than half of all experimental studies of practical cooperative learning methods involve STL methods.

All cooperative learning methods share the idea that students work together to learn and are responsible for one another's learning as well as their own. STL methods, in addition to this idea, emphasize the use of team goals and team success, which can only be achieved if all members of the team learn the objectives being taught. That is, in Student Team Learning the students' tasks are not to *do* something as a team but to *learn* something as a team.

Three concepts are central to all Student Team Learning methods: *team rewards, individual accountability,* and *equal opportunities for success.* Using STL techniques, teams earn certificates or other team rewards if they achieve above a designated criterion. The teams are not in competition to earn scarce rewards; all (or none) of the teams may achieve the criterion in a given week. *Individual accountability* means that the team's success depends on the individual learning of all team members. This focuses the activity of the team members on explaining concepts to one another and making sure that everyone on the team is ready for a quiz or other assessment that they will take without teammate help. *Equal opportunities for success* means that students contribute to their teams by improving over their own past performances. This ensures that high, average, and low achievers are equally challenged to do their best and that the contributions of all team members will be valued.

The findings of these experimental studies (summarized in this section) indicate that team rewards and individual accountability are essential elements for producing basic skills achievement (Slavin 1983a, 1983b, 1990). It is not enough to simply tell students to work together. They must have a reason to take one another's achievement seriously. Further, if students are rewarded for doing better than they have in the past, they will be more motivated to achieve than if they are rewarded based on their performance in comparison to others, because rewards for improvement make success neither too difficult nor too easy for students to achieve (Slavin 1980).

Four principal Student Team Learning methods have been extensively developed and researched. Two are general cooperative learning methods adaptable to most subjects and grade levels: Student Teams-Achievement Divisions (STAD) and Teams-Games-Tournament (TGT). The remaining two are comprehensive curriculums designed for use in particular subjects at particular grade levels: Team Assisted Individualization (TAI) for mathematics in grades 3–6 and Cooperative Integrated Reading and Composition (CIRC) for reading and writing instruction in grades 3–5.

- *Student Teams-Achievement Divisions (STAD)*—In STAD (Slavin 1978, 1986), students are assigned to four-member learning teams mixed in performance level, sex, and ethnicity. The teacher presents a lesson, and then students work within their teams to make sure that all team members have mastered the lesson. Finally, all students take individual quizzes on the material, at which time they may *not* help one another.

Students' quiz scores are compared to their own past averages, and points are awarded based on the degree to which students can meet or exceed their own earlier performances. These points are then summed to form team scores, and teams that meet certain criteria earn certificates or other rewards. The whole cycle of activities, from teacher presentation to team practice to quiz, usually takes three to five class periods.

STAD has been used in a wide variety of subjects, from mathematics to language arts and social studies. It has been used from grade 2 through college. STAD is most appropriate for teaching well-defined objectives with single right answers, such as mathematical computations and applications, language usage and mechanics, geography and map skills, and science facts and concepts.

- *Teams-Games-Tournament (TGT)*—Teams-Games-Tournament (DeVries and Slavin 1978; Slavin 1986) was the first of the Johns Hopkins cooperative learning methods. It uses the same teacher presentations and teamwork as in STAD, but replaces the quizzes with weekly tournaments. In these, students compete with members of other teams to contribute points to their team scores. Students compete at three-person "tournament tables" against others with similar past records in mathematics. A "bumping" procedure changes table assignments to keep the competition fair. The winner at each tournament table brings the same number of points to his or her team, regardless of which table it is; this means that low achievers (competing with other low achievers) and high achievers (competing with other high achievers) have equal opportunities for success. As in STAD, high-performing teams earn certificates or other forms of team rewards. TGT is appropriate for the same types of objectives as STAD.

- *Team Assisted Individualization (TAI)*—Team Assisted Individualization (TAI; Slavin et al. 1986) shares with STAD and TGT the use of four-member mixed ability learning teams and certificates for high-performing teams. But where STAD and TGT use a single pace of instruction for the class, TAI combines cooperative learning with individualized instruction. Also, where STAD and TGT apply to most subjects and grade levels, TAI is specifically designed to teach mathematics to students in grades 3–6 (or older students not ready for a full algebra course).

In TAI, students enter an individualized sequence according to a placement test and then proceed at their own rates. In general, team members work on different units. Teammates check each others' work against answer sheets and help one another with any problems. Final unit tests are taken without teammate help and are scored by student monitors. Each week, teachers total the number of units completed by all team members and give certificates or other team rewards to teams that exceed a criterion score based on the number of final tests passed, with extra points for perfect papers and completed homework.

Because students take responsibility for checking each others' work and managing the flow of materials, the teacher can spend most of the class time presenting lessons to small groups of students drawn from the various teams who are working at the same point in the mathematics sequence. For example, the teacher might call up a decimals group, present a lesson, and then send the students back to their teams to work on problems. Then the teacher might call the fractions group, and so on.

- *Cooperative Integrated Reading and Composition (CIRC)*—The newest of the Student Team Learning methods is a comprehensive program for teaching reading and writing in the upper elementary grades called Cooperative Integrated Reading and Composition (CIRC) (Stevens et al. 1987). In CIRC, teachers use basal or literature-based readers and reading groups, much as in traditional reading programs. However, all students are assigned to teams composed of two pairs from two different reading groups. For example, a team might have two "Bluebirds" and two "Redbirds." While the teacher is working with one reading group, the paired students in the other groups are working on a series of cognitively engaging activities, including reading to one another, making predictions about how narrative stories will come out, summarizing stories to one another, writing responses to stories, and practicing spelling, decoding, and vocabulary. If the reading class is not divided into homogeneous reading groups, all students in the teams work with one another. Students work as a total team to master "main idea" and other comprehension skills. During language arts periods, students engage in writing drafts, revising and editing one another's work, and preparing for "publication" of team books.

In most CIRC activities, students follow a sequence of teacher instruction, team practice, team pre-assessments, and quizzes. That is, students do not take the quiz until their teammates have determined that they are ready. Certificates are given to teams based on the average performance of all team members on all reading and writing activities.

Jigsaw—Jigsaw was originally designed by Elliot Aronson and his colleagues (1978). In Aronson's Jigsaw method, students are assigned to six-member teams to work on academic material that has been broken down into sections. For example, a biography might be divided into early life, first accomplishments, major setbacks, later life, and impact on history. Each team member reads his or her section. Next, members of different teams who have studied the same sections meet in "ex-pert groups" to discuss their sections. Then the students return to their teams and take turns teaching their teammates about their sections. Since the only way students can learn sections other than their own is to listen carefully to their teammates, they are motivated to support and show interest in one another's work.

Slavin (1986) developed a modification of Jigsaw at Johns Hopkins University and then incorporated it in the Student Team Learning program. In this method, called Jigsaw II, students work in four- or five-member teams as in TGT and STAD. Instead of each student's being assigned a particular section of text, all students read a common narrative, such as a book chapter, a short story, or a biography. However, each student receives a topic (such as "climate" in a unit on France) on which to become an expert. Students with the same topics meet in expert groups to discuss them, after which they return to their teams to teach what they have learned to their teammates. Then students take individual quizzes, which result in team scores based on the improvement score system of STAD. Teams that meet preset standards earn certificates. Jigsaw is primarily used in social studies and other subjects where learning from text is important.

Learning Together—David Johnson and Roger Johnson at the University of Minnesota developed the Learning Together models of cooperative learning (Johnson and Johnson 1987). The methods they have researched involve students working on assignment sheets in four- or five-member heterogeneous groups. The groups hand in a single sheet and receive praise and rewards based on the group product. Their methods emphasize team-building activities before students begin working together and regular discussions within groups about how well they are working together.

Group Investigation—Group Investigation, developed by Shlomo Sharan and Yael Sharan at the University of Tel Aviv, is a general classroom organization plan in which students work in small groups using cooperative inquiry, group discussion, and cooperative planning and projects (Sharan and Sharan 1976). In this method, students form their own two- to six-member groups. After choosing subtopics from a unit being studied by the entire class, the groups further break their subtopics into individual tasks and carry out the activities necessary to prepare group reports. Each group then makes a presentation or display to communicate its findings to the entire class.

Research on Cooperative Learning

Cooperative learning methods are among the most extensively evaluated alternatives to traditional instruction in use today. Outcome evaluations include:

- academic achievement
- intergroup relations
- mainstreaming
- self-esteem
- others

Academic Achievement—More than 70 high-quality studies have evaluated various cooperative learning methods over periods of at least four weeks in regular elementary and secondary schools; 67 of these have measured effects on student achievement (see Slavin 1990). All these studies compared the effects of cooperative learning to those of traditionally taught control groups on measures of the same objectives pursued in all classes. Teachers and classes were either randomly assigned to cooperative or control conditions or matched on pretest achievement level and other factors.

Overall, of 67 studies of the achievement effects of cooperative learning 41 (61 percent) found significantly greater achievement in cooperative than in control classes. Twenty-five (37 percent) found no differences, and in only one study did the control group outperform the experimental group. However, the effects of cooperative learning vary considerably according to the particular methods used. As noted earlier, two elements must be present if cooperative learning is to be effective: *group goals* and *individual accountability* (Slavin 1983a, 1983b, 1990). That is, groups must be working to achieve some goal or to earn rewards or recognition, and the success of the group must depend on the individual learning of every group member.

In studies of methods such as STAD, TGT, TAI, and CIRC, effects on achievement have been consistently positive; 37 out of 44 such studies (84 percent) found significant positive achievement effects. In contrast, only four of 23 studies (17 percent) lacking group goals and individual accountability found positive effects on student achievement. Two of these positive effects were found in studies of Group Investigation in Israel (Sharan et al. 1984; Sharan and Shachar 1988). In Group Investigation, students in each group are responsible for one unique part of the group's overall task, ensuring individual accountability. Then the group's overall performance is evaluated. Even though there are no specific group rewards, the group evaluation probably serves the same purpose.

Why are group goals and individual accountability so important? To understand this, consider the alternatives. In some forms of cooperative learning, students work together to complete a single worksheet or to solve one problem together. In such methods, there is little reason for more able students to take time to explain what is going on to their less able groupmates or to ask opinions. When the group task is to *do* something, rather than to *learn* something, the participation of less able students may be seen as interference rather than help. It may be easier in this circumstance for students to give each other answers than to explain concepts or skills to one another.

In contrast, when the group's task is to ensure that every group member *learns* something, it is in the interests of every group member to spend time explaining concepts to his or her groupmates. Studies of students' behaviors within cooperative groups have consistently found that the students who gain most from cooperative work are those who give and receive elaborated explanations (Webb 1985). In contrast, Webb found that giving and receiving answers without explanations were *negatively* related to achievement gain. What group goals and individual accountability do is to motivate students to give explanations and to take one another's learning seriously, instead of simply giving answers.

Cooperative learning methods generally work equally well for all types of students. While occasional studies find particular advantages for high or low achievers, boys or girls, and so on, the great majority find equal benefits for all types of students. Sometimes teachers or parents worry that cooperative learning will hold back high achievers. The research provides absolutely no support for this claim; high achievers gain from cooperative learning (relative to high achievers in traditional classes) just as much as do low and average achievers (Slavin 1991).

Research on the achievement effects of cooperative learning has more often taken place in grades 3–9 than 10–12. Studies at the senior high school level are about as positive as those at earlier grade levels, but there is a need for more research at that level. Cooperative learning methods have been equally successful in urban, rural, and suburban schools and with students of different ethnic groups (although a few studies have found particularly positive effects for black students; see Slavin and Oickle 1981).

Among the cooperative learning methods, the Student Team Learning programs have been most extensively researched and most often found instructionally effective. Of 14 studies of STAD and closely related methods, 11 found significantly higher achievement for this method than for traditional instruction, and two found no differences. For example, Slavin and Karweit (1984) evaluated STAD over an entire school year in inner-city Philadelphia 9th grade mathematics classes. Student performance on a standardized mathematics test increased significantly more than in either a mastery learning group or a control group using the same materials. Substantial differences favoring STAD have been found in such diverse subjects as social studies (e.g., Allen and Van Sickle 1984), language arts (Slavin and Karweit 1981), reading comprehension (Stevens, Slavin, Farnish, and Madden 1988), mathematics (Sherman and Thomas 1986), and science (Okebukola 1985). Nine of 11 studies of TGT found similar results (DeVries and Slavin 1978).

The largest effects of Student Team Learning methods have been found in studies of TAI. Five of six studies found substantially greater learning of mathematics computations in TAI than in control classes, while one study found no differences (see Slavin 1985b). Experimental control differences were still substantial (though smaller) a year after the students were in TAI (Slavin and Karweit 1985). In mathematics concepts and applications, one of three studies (Slavin et al. 1984) found significantly greater gains in TAI than control methods, while two found no significant differences (Slavin and Karweit 1985).

In comparison with traditional control groups, three experimental studies of CIRC have found substantial positive effects on scores from standardized tests of reading comprehension, reading vocabulary, language expression, language mechanics, and spelling (Madden et al. 1986, Stevens et al. 1987, Stevens et al. 1990). Significantly greater achievement on writing samples was also found favoring the CIRC students in the two studies which assessed writing.

Other than STL methods, the most consistently successful model for increasing student achievement is Group Investigation (Sharan and Sharan 1976). One study of this method (Sharan et al. 1984) found that it increased the learning of English as a foreign language, while Sharan and Shachar (1988) found positive effects of Group Investigation on the learning of history and geography. A third study of only three weeks' duration (Sharan et al. 1980) also found positive effects on social studies achievement, particularly on higher-level concepts. The Learning Together methods (Johnson and Johnson 1987) have been found instructionally effective when they include the assignment of group grades based on the average of group members' individual quiz scores (e.g., Humphreys et al. 1982, Yager et al. 1985). Studies of the original Jigsaw method have not generally supported this approach (e.g., Moskowitz et al. 1983); but studies of Jigsaw II, which uses group goals and individual accountability, have shown positive effects (Mattingly and VanSickle 1990, Ziegler 1981).

Intergroup Relations—In the laboratory research on cooperation, one of the earliest and strongest findings was that people who cooperate learn to like one another (Slavin 1977b). Not surprisingly, the cooperative learning classroom studies have found quite consistently that students express greater liking for their classmates in general as a result of participating in a cooperative learning method (see Slavin 1983a, 1990). This is important in itself and even more important when the students have different ethnic backgrounds. After all, there is substantial evidence that, left alone, ethnic separateness in schools does not naturally diminish over time (Gerard and Miller 1975).

Social scientists have long advocated interethnic cooperation as a means of ensuring positive intergroup relations in desegregated settings. Contact Theory (Allport 1954), which is in the U.S. the dominant theory of intergroup relations, predicted that positive intergroup relations would arise from school desegregation if and only if students participated in cooperative, equal-status interaction sanctioned by the school. Research on cooperative learning methods has borne out the predictions of Contact Theory. These techniques emphasize cooperative, equal-status interaction between students of different ethnic backgrounds sanctioned by the school (Slavin 1985a).

In most of the research on intergroup relations, students were asked to list their best friends at the beginning of the study and again at the end. The number of friendship choices students made outside their own ethnic groups was the measure of intergroup relations.

Positive effects on intergroup relations have been found for STAD, TGT, TAI, Jigsaw, Learning Together, and Group Investigation models (Slavin 1985b). Two of these studies, one on STAD (Slavin 1979) and one on Jigsaw II (Ziegler 1981), included follow-ups of intergroup friendships several months after the end of the studies. Both found that students who had been in cooperative learning classes still named significantly more friends outside their own ethnic groups than did students who had been in control classes. Two studies of Group Investigation (Sharan et al. 1984, Sharan and Shachar 1988) found that students' improved attitudes and behaviors toward classmates of different ethnic backgrounds extended to classmates who had never been in the same groups, and a study of TAI (Oishi 1983) found positive effects of this method on cross-ethnic interactions outside as well as in class. The U.S. studies of cooperative learning and intergroup relations involved black, white, and (in a few cases) Mexican-American students. A study of Jigsaw II by Ziegler (1981) took place in Toronto, where the major ethnic groups were Anglo-Canadians and children of recent European immigrants. The Sharan (Sharan et al. 1984, Sharan and Shachar 1988) studies of Group Investigation took place in Israel and involved friendships between Jews of both European and Middle Eastern backgrounds.

Mainstreaming—Although ethnicity is a major barrier to friendship, it is not so large as the one between physically or mentally handicapped children and their normal-progress peers. Mainstreaming, an unprecedented opportunity for handicapped children to take their place in the school and society, has created enormous practical problems for classroom teachers, and it often leads to social rejection of the handicapped children. Because cooperative learning methods have been successful in improving relationships across the ethnicity barrier—which somewhat resembles the barrier between mainstreamed and normal-progress students—these methods have also been applied to increase the acceptance of the mainstreamed student.

The research on cooperative learning and mainstreaming has focused on the academically handicapped child. In one study, STAD was used to attempt to integrate students performing two years or more below the level of their peers into the social structure of the classroom. The use of STAD significantly reduced the degree to which the normal-progress students rejected their mainstreamed classmates and increased the academic achievement and self-esteem of all students, mainstreamed as well as normal-progress (Madden and Slavin 1983). Similar effects have been found for TAI (Slavin et al. 1984), and other research using cooperative teams has also shown significant improvements in relationships between mainstreamed academically handicapped students and their normal-progress peers (Ballard et al. 1977, Cooper et al. 1980).

In addition, one study in a self-contained school for emotionally disturbed adolescents found that the use of TGT increased positive interactions and friendships among students (Slavin 1977a). Five months after the study ended, these positive interactions were still found more often in the former TGT classes than in the control classes. In a study in a similar setting, Janke (1978) found that the emotionally disturbed students were more on-task, were better behaved, and had better attendance in TGT classes than in control classes.

Self-Esteem—One of the most important aspects of a child's personality is his or her self-esteem. Several researchers working on cooperative learning techniques have found that these methods do increase students' self-esteem. These improvements in self-esteem have been found for TGT and STAD

(Slavin 1990), for Jigsaw (Blaney et al. 1977), and for the three methods combined (Slavin and Karweit 1981). Improvements in student self-concepts have also been found for TAI (Slavin et al. 1984).

Other Outcomes—In addition to effects on achievement, positive intergroup relations, greater acceptance of mainstreamed students, and self-esteem, effects of cooperative learning have been found on a variety of other important educational outcomes. These include liking school, development of peer norms in favor of doing well academically, feelings of individual control over the student's own fate in school, and cooperativeness and altruism (see Slavin 1983a, 1990). TGT (DeVries and Slavin 1978) and STAD (Slavin 1978, Janke 1978) have been found to have positive effects on students' time-on-task. One study found that lower socioeconomic status students at risk of becoming delinquent who worked in cooperative groups in 6th grade had better attendance, fewer contacts with the police, and higher behavioral ratings by teachers in grades 7–11 than did control students (Hartley 1976). Another study implemented forms of cooperative learning beginning in kindergarten and continuing through the 4th grade (Solomon et al. 1990). This study found that the students who had been taught cooperatively were significantly higher than control students on measures of supportive, friendly, and prosocial behavior; were better at resolving conflicts; and expressed more support for democratic values.

Useful Strategies

Returning to the questions at the beginning of this article, we now see the usefulness of cooperative learning strategies for improving such diverse outcomes as student achievement at a variety of grade levels and in many subjects, intergroup relations, relationships between mainstreamed and normal-progress students, and student self-esteem. Further, their widespread and growing use demonstrates that cooperative learning methods are practical and attractive to teachers. The history of the development, evaluation, and dissemination of cooperative learning is an outstanding example of the use of educational research to create programs that have improved the educational experience of thousands of students and will continue to affect thousands more.

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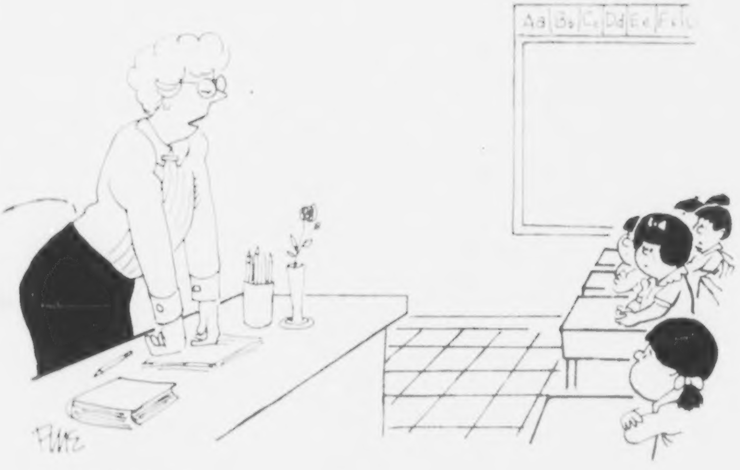
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"I'm your teacher, Mrs. Gridley. Learn to read, write, and do arithmetic, and nobody will get hurt."

How Asian Teachers Polish Each Lesson to Perfection

by James W. Stigler and Harold W. Stevenson

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Although there is no overall difference in intelligence, the differences in mathematical achievement of American children and their Asian counterparts are staggering.[1]

Let us look first at the results of a study we conducted in 120 classrooms in three cities: Taipei (Taiwan); Sendai (Japan); and the Minneapolis metropolitan area. First and fifth graders from representative schools in these cities were given a test of mathematics that required computation and problem solving. Among the 100 first graders in the three locations who received the lowest scores, 58 were American children; among the 100 lowest-scoring fifth graders, 67 were American children. Among the top 100 first graders in mathematics, there were only 15 American children. And only one American child appeared among the top 100 fifth graders. The highest-scoring American classroom obtained an average score lower than that of the lowest-scoring Japanese classroom and of all but one of the 20 classrooms in Taipei. In whatever way we looked at the data, the poor performance of American children was evident.

These data are startling, but no more so than the results of a study that involved 40 first- and 40 fifth-grade classrooms in the metropolitan area of

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Chicago—a very representative sample of the city and the suburbs of Cook County—and 22 classes in each of these grades in metropolitan Beijing (China). In this study, children were given a battery of mathematics tasks that included diverse problems, such as estimating the distance between a tree and a hidden treasure on a map, deciding who won a race on the basis of data in a graph, trying to explain subtraction to visiting Martians, or calculating the sum of 19 and 45. There was no area in which the American children were competitive with those from China. The Chinese children's superiority appeared in complex tasks involving the application of knowledge as well as in the routines of computation. When fifth graders were asked, for example, how many members of a stamp club with 24 members collected only foreign stamps if five-sixths of the members did so, 59 percent of Beijing children, but only nine percent of the Chicago children produced the correct answer. On a computation test, only 2.2 percent of the Chinese fifth graders scored at or below the mean for their American counterparts. All of the 20 Chicago area schools had average scores on the fifth-grade geometry test that were below those of the Beijing schools. The results from all these tasks paint a bleak picture of American children's competencies in mathematics.[2]

The poor performance of American students compels us to try to understand the reasons why. We have written extensively elsewhere about the cultural differences in attitudes toward learning and toward the importance of effort vs. innate ability and about the substantially greater amounts of time Japanese and Chinese students devote to academic activities in general and to the study of math in particular.[3] Important as these factors are, they do not tell the whole story. For that we have to take a close look inside the classrooms of Japan, China, and the United States to see how mathematics is actually taught in the three cultures.

Lessons Not Lectures

If we were asked briefly to characterize classes in Japan and China, we would say that they consist of coherent lessons that are presented in a thoughtful, relaxed, and non-authoritarian manner. Teachers frequently rely on students as sources of information. Lessons are oriented toward problem solving rather than rote mastery of facts and procedures and utilize many different types of representational materials. The role assumed by the teacher is that of knowledgeable guide, rather than that of prime dispenser of information and arbiter of what is correct. There is frequent verbal interaction in the classroom as the teacher attempts to stimulate students to produce, explain, and evaluate solutions to problems. These characteristics contradict stereotypes held by most Westerners about Asian teaching practices. Lessons are not rote; they are not filled with drill. Teachers do not spend large amounts of time lecturing but attempt to lead the children in productive interactions and discussions. And the children are not the passive automata depicted in Western descriptions but active participants in the learning process.

We begin by discussing what we mean by the coherence of a lesson. One way to think of a lesson is by using the analogy of a story. A good story is highly organized; it has a beginning, a middle, and an end; and it follows a protagonist who meets challenges and resolves problems that arise along the way. Above all, a good story engages the reader's interest in a series of interconnected events, which are best understood in the context of the events that precede and follow it.

Such a concept of a lesson guides the organization of instruction in Asia. The curricula are defined in terms of coherent lessons, each carefully designed to fill a 40- to 50-minute class period with sustained attention to the development of some concept or skill. Like a good story, the lesson has an introduction, a conclusion, and a consistent theme.

We can illustrate what we are talking about with this account of a fifth-grade Japanese mathematics class:

> The teacher walks in carrying a large paper bag full of clinking glass. Entering the classroom with a large paper bag is highly unusual, and by the time she has placed the bag on her desk the students are regarding her with rapt attention. What's in the bag? She begins to pull items out of the bag, placing them, one-by-one, on her desk. She removes a pitcher and a vase. A beer bottle evokes laughter and surprise. She soon has six containers lined up on her desk. The children continue to watch intently, glancing back and forth at each other as they seek to understand the purpose of this display.
>
> The teacher, looking thoughtfully at the containers, poses a question: "I wonder which one would hold the most water?" Hands go up, and the teacher calls on different students to give their guesses: "the pitcher," "the beer bottle," "the teapot." The teacher stands aside and ponders: "Some of you said one thing, others said something different. You don't agree with each other. There must be some way we can find out who is correct. How can we know who is correct?" Interest is high, and the discussion continues.
>
> The students soon agree that to find out how much each container holds they will need to fill the containers with something. How about water? The teacher finds some buckets and sends several children out to fill them with water. When they return, the teacher says: "Now what do we do?" Again there is a discussion, and after several minutes the children decide that they will need a smaller container to measure how much water fits into each of the larger containers. They decide on a drinking cup, and one of the students warns that they all have to fill each cup to the same level—otherwise the measure won't be the same for all of the groups.

> At this point the teacher divides the class into their groups (*ban*) and gives each group one of the containers and a drinking cup. Each group fills its container, counts how many cups of water it holds, and writes the result in a notebook. When all of the groups have completed the task, the teacher calls on the leader of each group to report on the group's findings and notes the results on the blackboard. She has written the names of the containers in a column on the left and a scale from 1 to 6 along the bottom. Pitcher, 4.5 cups; vase, 3 cups; beer bottle, 1.5 cups; and so on. As each group makes its report, the teacher draws a bar representing the amount, in cups, the container holds.
>
> Finally, the teacher returns to the question she posed at the beginning of the lesson: Which container holds the most water? She reviews how they were able to solve the problem and points out that the answer is now contained in the bar graph on the board. She then arranges the containers on the table in order according to how much they hold and writes a rank order on each container, from 1 to 6. She ends the class with a brief review of what they have done. No definitions of ordinate and abscissa, no discussion of how to make a graph preceded the example—these all became obvious in the course of the lesson, and only at the end did the teacher mention the terms that describe the horizontal and vertical axes of the graph they had made.

With one carefully crafted problem, this Japanese teacher has guided her students to discover—and most likely to remember—several important concepts. As this article unfolds, we hope to demonstrate that this example of how well-designed Asian class lessons are is not an isolated one; to the contrary, it is the norm. And as we hope to further demonstrate, excellent class lessons do not come effortlessly or magically. Asian teachers are not born great teachers; they and the lessons they develop require careful nurturing and constant refinement. The practice of teaching in Japan and China is more uniformly perfected than it is in the United States because their systems of education are structured to encourage teaching excellence to develop and flourish. Ours is not. We will take up the question of why and what can be done about this later in the piece. But first, we present a more detailed look at what Asian lessons are like.

Coherence Broken

Asian lessons almost always begin with a practical problem, such as the example we have just given, or with a word problem written on the blackboard. Asian teachers, to a much greater degree than American teachers, give coherence to their lessons by introducing the lesson with a word problem.

It is not uncommon for the Asian teacher to organize the entire lesson around the solution to this single problem. The teacher leads the children to recognize what is known and what is unknown and directs the students' attention to the critical parts of the problem. Teachers are careful to see that the problem is understood by all of the children, and even mechanics, such as mathematical computation, are presented in the context of solving a problem.

Before ending the lesson, the teacher reviews what has been learned and relates it to the problem she posed at the beginning of the lesson. American teachers are much less likely than Asian teachers to begin and end lessons in this way. For example, we found that fifth-grade teachers in Beijing spent eight times as long at the end of the class period summarizing the lessons as did those in the Chicago metropolitan area.

Now contrast the Japanese math lesson described above with a fifth-grade American mathematics classroom that we recently visited. Immediately after getting the students' attention, the teacher pointed out that today was Tuesday, "band day," and that all students in the band should go to the band room. "Those of you doing the news report today should meet over there in the corner," he continued. He then began the mathematics class with the remaining students by reviewing the solution to a computation problem that had been included in the previous day's homework. After this brief review, the teacher directed the students' attention to the blackboard, where the day's assignment had been written. From this point on, the teacher spent most of the rest of the period walking about the room monitoring the children's work, talking to individual children about questions or errors, and uttering "shushes" whenever the students began talking among themselves.

This example is typical of the American classrooms we have visited, classrooms where students spend more time in transition and less in academic activities, more time working on their own and less being instructed by the teacher; where teachers spend much of their time working with individual students and attending to matters of discipline; and where the shape of a coherent lesson is often hard to discern.

American lessons are often disrupted by irrelevant interruptions. These serve to break the continuity of the lesson and add to children's difficulty in perceiving the lesson as a coherent whole. In our American observations, the teacher interrupted the flow of the lesson with an interlude of irrelevant comments or the class was interrupted by someone else in 20 percent of all first-grade lessons and 47 percent of all fifth-grade lessons. This occurred less than 10 percent of the time at both grade levels in Sendai, Taipei, and Beijing. In fact, no interruptions of either type were recorded during the 80 hours of observation in Beijing fifth-grade classrooms. The mathematics lesson in one of the American classrooms we visited was interrupted every morning by a woman from the cafeteria who polled the children about their lunch plans and collected money from those who planned to eat the hot lunch. Interruptions, as well as inefficient transitions from one activity to another, make it difficult to sustain a coherent lesson throughout the class period.

Coherence is also disrupted when teachers shift frequently from one topic to another. This occurred often in the American classrooms we observed. The teacher might begin with a segment on measurement, then proceed to a segment on simple addition, then to a segment on telling time, and then to a second segment on addition. These segments constitute a math class, but they are hardly a coherent lesson. Such changes in topic were responsible for 21 percent of the changes in segments that we observed in American classrooms but accounted for only four percent of the changes in segments in Japanese classrooms.

Teachers frequently capitalize on variety as a means of capturing children's interest. This may explain why American teachers shift topics so frequently within the lesson. Asian teachers also seek variety, but they tend to introduce new activities instead of new topics. Shifts in materials do not necessarily pose a threat to coherence. For example, the coherence of a lesson does not diminish when the teacher shifts from working with numerals to working with concrete objects, if both are used to represent the same subtraction problem. Shifting the topic, on the other hand, introduces variety, but at the risk of destroying the coherence of the lesson.

Classroom Organization

Elementary school classrooms are typically organized in one of three ways: the whole class is working as a unit; the class is divided into a number of small groups; or children work individually. In our observations, we noted when the child was receiving instruction or assistance from the teacher and when the student was working on his own. The child was considered to be receiving instruction whenever the teacher was the leader of the activity, whether it involved the whole class, a small group, or only the individual child.

Looking at the classroom in this manner led us to one of our most pronounced findings: Although the number of children in Asian classes is significantly greater than the number in American classes, Asian students received much more instruction from their teachers than American students. In Taiwan, the teacher was the leader of the child's activity 90 percent of the time, as opposed to 74 percent in Japan, and only 46 percent in the United States. No one was leading instruction nine percent of the time in Taiwan, 26 percent in Japan, and an astonishing 51 percent of the time in the United States. Even American first graders actually spent more time on their own than they did participating in an activity led by the teacher.

One of the reasons American children received less instruction is that American teachers spent 13 percent of their time in the mathematics classes not working with any students, something that happened only six percent of the time in Japan and nine percent in Taiwan. (As we will see later, American teachers have to steal class time to attend to the multitude of chores involving preparation, assessment, and administration because so little non-teaching time is available for them during the day.)

A much more critical factor in the erosion of instructional time was the amount of time American teachers were involved with individuals or small groups. American children spend 10 percent of their time in small groups and 47 percent of their time working individually. Much of the 87 percent of the time American teachers were working with their students was spent with these individual students or small groups, rather than with the class as a whole. When teachers provide individual instruction, they must leave the rest of the class unattended, so instructional time for all remaining children is reduced.

Children can learn without a teacher. Nevertheless, it seems likely that they could profit from having their teacher as the leader of their activities more than half of the time they are in the classroom. It is the incredibly large amounts of time that American children are left unassisted and the effect that unattended time has on the coherence of the larger lesson that is the problem.

When children must work alone for long periods of time without guidance or reaction from the teacher, they begin to lose focus on the purpose of their activity. Asian teachers not only assign less seatwork than American teachers, they also use seatwork differently. Chinese and Japanese teachers tend to use short, frequent periods of seatwork, alternating between group discussion of problems and time for children to work problems on their own. Seatwork is thereby embedded into the lesson. After they work individually or in small groups on a problem, Asian students are called upon to present and defend the solutions they came up with. Thus, instruction, practice, and evaluation are tightly interwoven into a coherent whole. In contrast, the average length of seatwork in American fifth-grade classrooms was almost twice as long as it was in Asian classrooms. And, instead of embedding seatwork into the ongoing back and forth of the lesson, American teachers tend to relegate it to one long period at the end of the class, where it becomes little more than a time for repetitious practice. In Chicago, 59 percent of all fifth-grade lessons ended with a period of seatwork, compared with 23 percent in Sendai and 14 percent in Taipei. American teachers often do not discuss the work or its connection to the goal of the lesson, or even evaluate its accuracy. Seatwork was never evaluated or discussed in 48 percent of all American fifth-grade classes we observed, compared to less than three percent of Japanese classes and six percent of Taiwan classes.

Since Asian students spend so much of their time in whole-group work, we need to say a word about that format. Whole-class instruction in the United States has gotten a somewhat bad reputation. It has become associated with too much teacher talk and too many passive, tuned-out students. But as we will see in more detail as we continue our description of Asian classrooms, whole-class instruction in Japan and China is a very lively, engaging enteprise. Asian teachers do not spend large amounts of time lecturing. They present interesting problems; they pose provocative questions; they probe and guide. The students work hard, generating multiple approaches to a solution, explaining the rationale behind their methods, and making good use of wrong answers.

Handling Diversity

The organization of American elementary school classrooms is based on the assumption that whole-group instruction cannot accommodate students' diverse abilities and levels of achievement; thus, large amounts of whole-class time are given up so that the teacher can work individually with students. Asian educators are more comfortable in the belief that all children, with proper effort, can take advantage of a uniform educational experience, and so they are able to focus on providing the same high-quality experience to all students. Our results suggest that American educators need to question their long-held assumption that an individualized learning experience is inherently a higher-quality, more effective experience than is a whole-class learning experience. Although it may be true that an equal amount of time with a teacher may be more effective in a one-on-one situation than in a large-group situation, we must realize that the result of individualized instruction, given realistic financial constraints, is to drastically reduce the amount of teacher instruction every child receives.

Japanese and Chinese teachers recognize individual differences among students, but they handle that diversity in a very different way. First, as we will see in more detail later, they have much greater amounts of non-teaching time than do American teachers, and part of that time is available for working with individual students. They may spend extra time with slower students or ask faster students to assist them, but they focus their lesson on teaching all children regardless of apparent differences in ability or developmental readiness. Before we discuss how they do that in a whole-group setting, we need to first address the question of whether American classrooms are more diverse than Asian ones, thus potentially rendering whole-class instruction more difficult.

Whenever we discuss our research on teaching practices, someone in the audience inevitably reminds us that Japan and China are nations with relatively homogeneous populations while the United States is the melting pot of the world. How could we expect that practices used in Asian societies could possibly be relevant for the American context, where diversity is the rule in race, ethnicity, language, and social class?

What impedes teaching is the uneven preparation of children for the academic tasks that must be accomplished. It is diversity in children's educational backgrounds, not in their social and cultural backgrounds, that poses the greatest problems in teaching. Although the United States is culturally more diverse than Japan or China, we have found no more diversity at the classroom level in the educational level of American than of Asian students. The key factor is that, in the United States, educational and cultural diversity are positively related, leading some persons to the inappropriate conclusion that it is ethnic and cultural diversity, rather than educational diversity, that leads to the difficulties faced by American teachers.

It is true, for example, that there is greater variability in mathematics achievement among American than among Japanese children, but this does not mean that the differences are evident in any particular classroom. Variability in the United States exists to a large extent across neighborhoods and schools (rather than within them). Within individual classrooms, the variability in levels of academic achievement differs little between the United States and Japan, Taiwan, or China. It is wrong to argue that diversity within classrooms is an American problem. Teachers everywhere must deal with students who vary in their knowledge and motivation.

Tracking does not exist in Asian elementary schools. Children are never separated into different classrooms according to their presumed levels of intellectual ability. This egalitarian philosophy carries over to organization within the classroom. Children are not separated into reading groups according to their ability; there is no division of the class into groups differentiated by the rate at which they proceed through their mathematics books. No children leave the classroom for special classes, such as those designed for children who have been diagnosed as having learning disabilities.

How do teachers in Asian classrooms handle diversity in students' knowledge and skills? For one thing, they typically use a variety of approaches in their teaching, allowing students who may not understand one approach the opportunity to experience other approaches to presenting the material. Periods of recitation are alternated with periods in which children work for short periods on practice problems. Explanations by the teacher are interspersed with periods in which children work with concrete materials or struggle to come up with their own solutions to problems. There is continuous change from one mode of presentation, one type of representation, and one type of teaching method to another.

Asian teaching practices thrive in the face of diversity, and some practices even depend on diversity for their effectiveness. Asking students to suggest alternative solutions to a problem, for example, works best when students have had experience in generating a variety of solutions. Incorrect solutions, which are typically dismissed by the American teacher, become topics for discussion in Asian classrooms, and all students can learn from this discussion. Thus, while American schools attempt to solve the problems of diversity by segregating children into different groups or different classrooms, and by spending large amounts of regular class time working with individual students, Asian teachers believe that the only way they can cope with the problem is by devising teaching techniques that accommodate the different interests and backgrounds of the children in their classrooms.

Asian teachers also exploit the fact that the same instruction can affect different students in different ways, something that may be overlooked by American teachers. In this sense, Asian teachers subscribe to what would be considered in the West to be a "constructivist" view of learning. According to this view, knowledge is regarded as something that must be constructed by the child rather than as a set of facts and skills that can be imparted by the teacher. Because children are engaged in their own construction of knowledge, some of the major tasks for the teacher are to pose provocative questions, to allow adequate time for reflection, and to vary teaching techniques so that they are responsive to differences in students' prior experience. Through such practices, Asian teachers are able to accommodate individual differences in learning, even though instruction is not tailored to each student.

Use of Real-World Problems and Objects

Elementary school mathematics is often defined in terms of mathematical symbols and their manipulation; for example, children must learn the place-value system of numeration and the operations for manipulating numerals to add, subtract, multiply, and divide. In addition, children must be able to apply these symbols and operations to solving problems. In order to accomplish these goals, teachers rely primarily on two powerful tools for representing mathematics: language and the manipulation of concrete objects. How effectively teachers use these forms of representation plays a critical role in determining how well children will understand mathematics.

One common function of language is in defining terms and stating rules for performing mathematical operations. A second, broader function is the use of language as a means of connecting mathematical operations to the real world and of integrating what children know about mathematics. We find that American elementary school teachers are more prone to use language to define terms and state rules than are Asian teachers, who, in their efforts to make mathematics meaningful, use language to clarify different aspects of mathematics and to integrate what children know about mathematics with the demands of real-world problems. Here is an example of what we mean by a class in which the teacher defines terms and states rules:

> An American teacher announces that the lesson today concerns fractions. Fractions are defined and she names the numerator and denominator. "What do we call this?" she then asks. "And this?" After assuring herself that the children understand the meaning of the terms, she spends the rest of the lesson teaching them to apply the rules for forming fractions.

Asian teachers tend to reverse the procedure. They focus initially on interpreting and relating a real-world problem to the quantification that is necessary for a mathematical solution and then to define terms and state rules. In the following example, a third-grade teacher in Japan was also teaching a lesson that introduced the notation system for fractions.

> The lesson began with the teacher posing the question of how many liters of juice (colored water) were contained in a large beaker. "More than one liter," answered one child. "One and a half liters," answered another. After several children had made guesses, the teacher suggested that they pour the juice into some one-liter beakers and see. Horizontal lines on each beaker

> divided it into thirds. The juice filled one beaker and part of a second. The teacher pointed out that the water came up to the first line on the second beaker—only one of the three parts was full. The procedure was repeated with a second set of beakers to illustrate the concept of one-half. After stating that there had been one and one-out-of-three liters of juice in the first big beaker and one and one-out-of-two liters in the second, the teacher wrote the fractions on the board. He continued the lesson by asking the children how to represent two parts out of three, two parts out of five, and so forth. Near the end of the period he mentioned the term "fraction" for the first time and attached names to the numerator and the denominator. He ended the lesson by summarizing how fractions can be used to represent the parts of a whole.

In the second example, the concept of fractions emerged from a meaningful experience; in the first, it was introduced initially as an abstract concept. The terms and operations in the second example flowed naturally from the teacher's questions and discussion; in the first, language was used primarily for defining and summarizing rules. Mathematics ultimately requires abstract representation, but young children understand such representation more readily if it is derived from meaningful experience than if it results from learning definitions and rules.

Asian teachers generally are more likely than American teachers to engage their students, even very young ones, in the discussion of mathematical concepts. The kind of verbal discussion we find in American classrooms is more short-answer in nature, oriented, for example, toward clarifying the correct way to implement a computational procedure.

Teachers ask questions for different reasons in the United States and in Japan. In the United States, the purpose of a question is to get an answer. In Japan, teachers pose questions to stimulate thought. A Japanese teacher considers a question to be a poor one if it elicits an immediate answer, for this indicates that students were not challenged to think. One teacher we interviewed told us of discussions she had with her fellow teachers on how to improve teaching practices. "What do you talk about?" we wondered. "A great deal of time," she reported, "is spent talking about questions we can pose to the class—which wordings work best to get students involved in thinking and discussing the material. One good question can keep a whole class going for a long time; a bad one produces little more than a simple answer."

In one memorable example recorded by our observers, a Japanese first-grade teacher began her class by posing the question to one of her students: "Would you explain the difference between what we learned in yesterday's lesson and what you came across in preparing for today's lesson?" The young student thought for a long time, but then answered the question intelligently, a performance that undoubtedly enhanced his understanding of both lessons.

Concrete Representations

Every elementary school student in Sendai possesses a "Math Set," a box of colorful, well-designed materials for teaching mathematical concepts: tiles, clock, ruler, checkerboard, colored triangles, beads, and many other attractive objects.

In Taipei, every classroom is equipped with a similar, but larger, set of such objects. In Beijing, where there is much less money available for purchasing such materials, teachers improvise with colored paper, wax fruit, plates, and other easily obtained objects. In all cases, these concrete objects are considered to be critically important tools for teaching mathematics, for it is through manipulating these objects that children can form important links between real-world problems and abstract mathematical notations.

American teachers are much less likely than Chinese or Japanese teachers to use concrete objects. At fifth grade, for example, Sendai teachers were nearly twice as likely to use concrete objects as the Chicago area teachers, and Taipei teachers were nearly five times as likely. There was also a subtle, but important, difference in the way Asian and American teachers used concrete objects. Japanese teachers, for example, use the items in the Math Set throughout the elementary school years and introduced small tiles in a high percentage of the lessons we observed in the first grade. American teachers seek variety and may use Popsicle sticks in one lesson, and in another, marbles, Cheerios, M&Ms, checkers, poker chips, or plastic animals. The American view is that objects should be varied in order to maintain children's interest. The Asian view is that using a variety of representational materials may confuse children, and thereby make it more difficult for them to use the objects for the representation and solution of mathematics problems. Having learned to add with tiles makes multiplication easier to understand when the same tiles are used.

Through the skillful use of concrete objects, teachers are able to teach elementary school children to understand and solve problems that are not introduced in American curricula until much later. An example occurred in a fourth-grade mathematics lesson we observed in Japan. The problem the teacher posed is a difficult one for fourth graders, and its solution is generally not taught in the United States until much later. This is the problem:

> There are a total of 38 children in Akira's class. There are six more boys than there are girls. How many boys and how many girls are in the class?

This lesson began with a discussion of the problem and with the children proposing ways to solve it. After the discussion, the teacher handed each child two strips of paper, one six units longer than the other, and told the class that the strips would be used to help them think about the problem. One slip represented the number of girls in the class and the other represented the number of boys. By lining the strips next to each other, the children could see that the degree to which the longer one protruded beyond the shorter one represented six boys. The procedure for solving the problem then unfolded as the teacher, through skillful questioning, led the children to the solution: The number of girls was found by taking the total of both strips, subtracting six to make the strips of equal length, and then dividing by two. The number of boys could be found, of course, by adding six to the number of girls. With this concrete visual representation of the problem and careful guidance from the teacher, even fourth graders were able to understand the problem and its solution.

Students Construct Multiple Solutions

A common Western stereotype is that the Asian teacher is an authoritarian purveyor of information, one who expects students to listen and memorize correct answers or correct procedures rather than to construct knowledge themselves. This may or may not be an accurate description of Asian high school teachers,[4] but, as we have seen in previous examples, it does not describe the dozens of elementary school teachers that we have observed.

Chinese and Japanese teachers rely on students to generate ideas and evaluate the correctness of the ideas. The possibility that they will be called upon to state their own solution as well as to evaluate what another student has proposed keeps Asian students alert, but this technique has two other important functions. First, it engages students in the lesson, increasing their motivation by making them feel they are participants in a group process. Second, it conveys a more realistic impression of how knowledge is acquired. Mathematics, for example, is a body of knowledge that has evolved gradually through a process of argument and proof. Learning to argue about mathematical ideas is fundamental to understanding mathematics. Chinese and Japanese children begin learning these skills in the first grade; many American elementary school students are never exposed to them.

We can illustrate the way Asian teachers use students' ideas with the following example. A fifth-grade teacher in Taiwan began her mathematics lesson by calling attention to a six-sided figure she had drawn on the blackboard. She asked the students how they might go about finding the area of the shaded region. "I don't want you to tell me what the actual area is, just tell me the approach you would use to solve the problem. Think of as many different ways as you can of ways you could determine the area that I have drawn in yellow chalk." She allowed the students several minutes to work in small groups and then called upon a child from each group to describe the group's solution. After each proposal, many of which were quite complex, the teacher asked members of the other groups whether the procedure described could yield a correct answer. After several different procedures had been suggested, the teacher moved on to a second problem with a different embedded figure and repeated the process. Neither teacher nor students actually carried out a solution to the problem until all of the alternative solutions had been discussed. The lesson ended with the teacher affirming the importance of coming up with multiple solutions. "After all," she said, "we face many problems every day in the real world: We have to remember that there is not only one way we can solve each problem."

American teachers are less likely to give students opportunities to respond at such length. Although a great deal of interaction appears to occur in American classrooms—with teachers and students posing questions and giving answers—American teachers generally pose questions that are answerable with a yes or no or with a short phrase. They seek a correct answer and continue calling on students until one produces it. "Since we can't subtract eight from six," says an American teacher, "we have to... what?" Hands go up, the teacher calls on a girl who says "Borrow." "Correct," the teacher replies. This kind of interchange does not establish the student as a valid source of information, for the final arbiter of the correctness of the student's opinions is still the teacher. The situation is very different in Asian classrooms, where children are likely to be asked to explain their answers and other children are then called upon to evaluate their correctness.

Clear evidence of these differing beliefs about the roles of students and teachers appears in the observations of how teachers evaluate students' responses. The most frequent form of evaluation used by American teachers was praise, a technique that was rarely used in either Taiwan or Japan. In Japan, evaluation most frequently took the form of a discussion of children's errors.

Praise serves to cut off discussion and to highlight the teacher's role as the authority. It also encourages children to be satisfied with their performance rather than informing them about where they need improvement. Discussing errors, on the other hand, encourages argument and justification and involves students in the exciting quest of assessing the strengths and weaknesses of the various alternative solutions that have been proposed.

Why are American teachers often reluctant to encourage students to participate at greater length during mathematics lessons? One possibility is that they feel insecure about the depth of their own mathematical training. Placing more emphasis on students' explanations necessarily requires teachers to relinquish some control over the direction the lesson will take. This can be a frightening prospect to a teacher who is unprepared to evaluate the validity of novel ideas that students inevitably propose.

Using Errors Effectively

We have been struck by the different reactions of Asian and American teachers to children's errors. For Americans, errors tend to be interpreted as an indication of failure in learning the lesson. For Chinese and Japanese, they are an index of what still needs to be learned. These divergent interpretations result in very different reactions to the display of errors—embarrassment on the part of the American children, calm acceptance by Asian children. They also result in differences in the manner in which teachers utilize errors as effective means of instruction.

We visited a fifth-grade classroom in Japan the first day the teacher introduced the problem of adding fractions with unequal denominators. The problem was a simple one: adding one-third and one-half. The children were told to solve the problem and that the class would then review the different solutions.

After everyone appeared to have completed the task, the teacher called on one of the students to give his answer and to explain his solution. "The answer is two-fifths," he stated. Pointing first to the numerators and then to the denominators, he explained: "One plus one is two; three plus two is five. The answer is two-fifths." Without comment, the teacher asked another boy for his solution. "Two point one plus three point one, when changed into a fraction adds up to two-fifths." The children in the classroom looked puzzled. The teacher, unperturbed, asked a third student for her solution. "The answer is five-sixths." The student went on to explain how she had found the common denominator, changed the fractions so that each had this denominator, and then added them.

The teacher returned to the first solution. "How many of you think this solution is correct?" Most agreed that it was not. She used the opportunity to direct the children's attention to reasons why the solution was incorrect. "Which is larger, two-fifths or one-half?" The class agreed that it was one-half. "It is strange, isn't it, that you could add a number to one-half and get a number that is smaller than one-half?" She went on to explain how the procedure the child used would result in the odd situation where, when one-half was added to one-half, the answer yielded is one-half. In a similarly careful, interactive manner, she discussed how the second boy had confused fractions with decimals to come up with his surprising answer. Rather than ignoring the incorrect solutions and concentrating her attention on the correct solution, the teacher capitalized on the errors the children made in order to dispel two common misperceptions about fractions.

We have not observed American teachers responding to children's errors so inventively. Perhaps because of the strong influence of behavioristic teaching that conditions should be arranged so that the learner avoids errors and makes only a reinforceable response, American teachers place little emphasis on the constructive use of errors as a teaching technique. It seems likely, however, that learning about what is wrong may hasten children's understanding of why the correct procedures are appropriate.

Why Not Here?

Few who have visited urban classrooms in Asia would disagree that the great majority of Chinese and Japanese teachers are highly skilled professionals. Their dedication is legendary; what is often not appreciated is how thoughtfully and adroitly they guide children through the vast amount of material that they must master during the six years of elementary school. We, of course, witnessed examples of excellent lessons in American classrooms. And there are of course individual differences among Asian teachers. But what has impressed us in our personal observations and in the data from our observational studies is how remarkably well most Asian teachers teach. It is the *widespread* excellence of Asian class lessons, the high level of performance of the *average* teacher, that is so stunning.

The techniques used by Chinese and Japanese teachers are not new to the teaching profession—nor are they foreign or exotic. In fact, they are the types of techniques often recommended by American educators. What the Japanese and Chinese examples demonstrate so compellingly is that when widely implemented, such practices can produce extraordinary outcomes.

Unfortunately, these techniques have not been broadly applied in the United States. Why? One reason, as we have discussed, is the Asian belief that the whole-group lesson, if done well, can be made to work for every child. With that assumption, Asian teachers can focus on the perfection of that lesson. However, even if American educators shared that belief, it would be difficult for them to achieve anything near the broad-based high quality that we observed in Asian classrooms. This is not the fault of American teachers. The fault lies with a system that prepares them inadequately and then exhausts them physically, emotionally, and intellectually while denying them the collegial interaction that every profession relies upon for the growth and refinement of its knowledge base.

The first major obstacle to the widespread development and execution of excellent lessons in America is the fact that American teachers are overworked. It is inconceivable that American teachers, by themselves, would be able to organize lively, vivid, coherent lessons under a regimen that requires that they teach hour after hour every day throughout the school year. Preparing lessons that require the discovery of knowledge and the construction of understanding takes time. Teaching them effectively requires energy. Both are in very short supply for most American teachers.

Being an elementary school teacher in the United States at the end of the twentieth century is extraordinarily difficult, and the demands made by American society exhaust even the most energetic among them. "I'm dancing as fast as I can" one teacher summarized her feelings about her job, "but with all the things that I'm supposed to do, I just can't keep up."

The full realization of how little time American teachers have when they are not directly in charge of children became clear to us during a meeting in Beijing. We were discussing the teachers' workday. When we informed the Chinese teachers that American teachers are responsible for their classes all day long, with only an hour or less outside the classroom each day, they looked incredulous. How could any teacher be expected to do a good job when there is no time outside of class to prepare and correct lessons, work with individual children, consult with other teachers, and attend to all of the matters that arise in a typical day at school! Beijing teachers teach no more than three hours a day, unless the teacher is a homeroom teacher, in which case, the total is four hours. During the first three grades, the teaching assignment includes both reading and mathematics; for the upper three grades of elementary school, teachers specialize in one of these subjects. They spend the rest of their day at school carrying out all of their other responsibilities to their students and to the school. The situation is similar in Japan. According to our estimate, Japanese elementary school teachers are in charge of classes only 60 percent of the time they are at school.

The large amounts of nonteaching time at school are available to Asian teachers because of two factors. The first concerns the number of teachers typically assigned to Asian schools. Although class sizes are considerably larger in Asia, the student-to-teacher ratio within a school does not differ greatly from that in the United States. By having more students in each class and the same number of teachers in the school, all teachers can have fewer teaching hours. Time is freed up for teachers to meet and work together on a daily basis, to prepare lessons for the next day, to work with individual children, and to attend staff meetings.

The second factor increasing the time available to Japanese and Chinese teachers at school is that they spend more hours at school each day than do American teachers. In our study, for example, teachers in Sendai and Taipei spent an average of 9.5 and 9.1 hours per day, respectively, compared to only 7.3 hours for the American teachers. Asian teachers arrive at school early and stay late, which gives them time to meet together and to work with children who need extra help. Most American teachers, in contrast, arrive at school shortly before classes begin and leave not long after they end. This does not mean a shorter work week for American teachers. What it does mean is that they must devote their evenings to working alone on the next day's lessons, further increasing their sense of isolation.

Learning from Each Other

The second reason Asian class lessons are so well crafted is that there is a very systematic effort to pass on the accumulated wisdom of teaching practice to each new generation of teachers and to keep perfecting that practice by providing teachers the opportunities to continually learn from each other.

Americans often act as if good teachers are born, not made. We hear this from both teachers and parents. They seem to believe that good teaching happens if the teacher has a knack with children, gets along well with them, and keeps them reasonably attentive and enthusiastic about learning. It is a commonly accepted truism in many colleges of education that teaching is an art and that students cannot be taught how to teach.

Perhaps because of this belief, students emerge from American colleges of education with little training in how to design and teach effective lessons. It is assumed that teachers will discover this for themselves. Courses in teaching methods are designed to serve a different purpose. On the one hand, they present theories of learning and cognitive development. Although the students are able to quote the major tenets of the theorists currently in vogue, the theories remain as broad generalizations that are difficult to apply to the everyday tasks that they will face as classroom teachers. At the opposite extreme, these methods courses provide education students with lists of specific suggestions for activities and materials that are easy to use and that children should enjoy (for example, pieces of breakfast cereal make handy counters for teaching basic number facts). Teachers are faced, therefore, with information that is either too general to be applied readily or so specific that it has only limited usefulness. Because of this, American teachers complain that most of what they know had to be learned by themselves, alone, on the job.

In Asia, graduates of teacher training programs are still considered to be novices who need the guidance and support of their experienced colleagues. In the United States, training comes to a near halt after the teachers acquire their teaching certificates. American teachers may take additional coursework in the evenings or during summer vacations, or they may attend district or citywide workshops from time to time. But these opportunities are not considered to be an essential part of the American system of teacher training.

In Japan, the system of teacher training is much like an apprenticeship under the guidance of experienced colleagues. The teacher's first year of employment marks the beginning of a lengthy and elaborate training process. By Japanese law, beginning teachers must receive a minimum of 20 days of inservice training during their first year on the job.[5] Supervising the inservice training are master teachers, selected for their teaching ability and their willingness to assist their young colleagues. During one-year leaves of absence from their own classrooms, they observe the beginner in the classroom and offer suggestions for improvement.

In addition to this early tutelage in teaching techniques, Japanese teachers, beginners as well as seasoned teachers, are required to continually perfect their teaching skills through interaction with other teachers. One mechanism is through meetings organized by the vice principal and head teachers of their own school. These experienced professionals assume responsibility for advising and guiding their young colleagues. The head teachers organize meetings to discuss teaching techniques and to devise lesson plans and handouts. These meetings are supplemented by informal districtwide study groups and courses at municipal or prefectural education centers.[6]

A glimpse at what takes place in these study groups is provided in a conversation we recently had with a Japanese teacher. She and her colleagues spend a good deal of their time together working on lesson plans. After they finish a plan, one teacher from the group teaches the lesson to her students while the other teachers look on. Afterward, the group meets again to criticize the teacher's performance and to make suggestions for how the lesson could be improved. In her school, there is an annual "teaching fair." Teachers from other schools are invited to visit the school and observe the lessons being taught. The visitors rate the lessons, and the teacher with the best lesson is declared the winner.

In addition, national television in Japan presents programs that show how master teachers handle particular lessons or concepts. In Taiwan, such demonstrations are available on sets of videotapes that cover the whole curriculum.

Making use of lessons that have been honed over time does not mean that the Asian teacher simply mimics what she sees. As with great actors or musicians, the substance of the curriculum becomes the script or the score; the goal is to perform the role or piece as effectively and creatively as possible. Rather than executing the curriculum as a mere routine, the skilled teacher strives to perfect the presentation of each lesson. She uses the teaching techniques she has learned and imposes her own interpretation on these techniques in a manner that she thinks will interest and motivate her pupils.

Of course, teachers find it easier to share helpful tips and techniques among themselves when they are all teaching the same lesson at about the same time. The fact that Taiwan, Japan, and China each has a national curriculum that provides a common focus is a significant factor in teacher interaction. Not only do we have no national curriculum in the United States, but the curriculum may not be consistent within a city or even within a single school. American textbooks, with a spiral curriculum that repeats topics year after year and with a profusion of material about each topic, force teachers to omit some of each year's material. Even when teachers use the same textbook, their classes differ according to which topics they choose to skip and in the pace with which they proceed through the text. As a result, American teachers have less incentive than Asian teachers to share experiences with each other or to benefit from the successes and failures that others have had in teaching particular lessons.

Adding further to the sense of isolation is the fact that American teachers, unlike other professionals, do not share a common body of knowledge and experience. The courses offered at different universities and colleges vary, and even among their required courses, there is often little common content from college to college. Student teaching, the only other activity in which all budding teachers participate, is a solitary endeavor shared only with the regular classroom teacher and perhaps a few fellow student teachers.

Opportunities for Asian teachers to learn from each other are influenced, in part, by the physical arrangements of the schools. In Japanese and Chinese schools, a large room in each school is designed as a teachers' room, and each teacher is assigned a desk in this room. It is here that they spend their time away from the classroom preparing lessons, correcting students' papers, and discussing teaching techniques. American teachers, isolated in their own classrooms, find it much harder to discuss their work with colleagues. Their desk and teaching materials are in their own classrooms, and the only common space available to teachers is usually a cramped room that often houses supplies and the school's duplicating facilities, along with a few chairs and a coffee machine. Rarely do teachers have enough time in their visits to this room to engage in serious discussions of educational policy or teaching practices.

* * *

Critics argue that the problems facing the American teacher are unique and that it is futile to consider what Japanese and Chinese teaching are like in seeking solutions to educational problems in the United States. One of the frequent arguments is that the students in the typical Asian classroom share a common language and culture, are well disciplined and attentive, and are not distracted by family crises and their own personal problems, whereas the typical American teacher is often faced with a diverse, burdened, distracted group of students. To be sure, the conditions encountered by teachers differ greatly among these societies. Week after week, American teachers must cope with children who present them with complex, wrenching personal problems. But much of what gives American classrooms their aura of disarray and disorganization may be traced to how schools are organized and teachers are trained as well as to characteristics of the children.

It is easy to blame teachers for the problems confronting American education, and this is something that the American public is prone to do. The accusation is unfair. We cannot blame teachers when we deprive them of adequate training and yet expect that on their own they will become innovative teachers; when we cast them in the roles of surrogate parents, counselors, and psychotherapists and still expect them to be effective teachers; and when we keep them so busy in the classroom that they have little time or opportunity for professional development once they have joined the ranks of the teaching profession.

Surely the most immediate and pressing task in educating young students is to create a new type of school environment, one where great lessons are a commonplace occurrence. In order to do this, we must ask how we can institute reforms that will make it possible for American teachers to practice their profession under conditions that are as favorable for their own professional development and for the education of children as those that exist in Asia.

Notes

1. The superior academic achievement of Chinese and Japanese children sometimes leads to speculation that they are brighter than American children. This possibility has been supported in a few reports that have received attention in the popular press and in several scientific journals. What has not been reported or widely understood is that, without exception, the studies contending that differences in intelligence are responsible for differences in academic performance have failed to meet acceptable standards of scientific inquiry. In fact, studies that have reported differences in I.Q. scores between Asian and American children have been flawed conceptually and methodologically. Their major defects are nonequivalent tests used in the different locations and noncomparable samples of children.

To determine the cognitive abilities of children in the three cultures, we needed tests that were linguistically comparable and culturally unbiased. These requirements preclude reliance on tests translated from one language to another or the evaluation of children in one country on the basis of norms obtained in another country. We assembled a team with members from each of the three cultures, and they developed 10 cognitive tasks falling into traditional "verbal" and "performance" categories.

The test results revealed no evidence of overall differences in the cognitive functioning of American, Chinese, and Japanese children. There was no tendency for children from any of the three cultures to achieve significantly higher average scores on all the tasks. Children in each culture had strengths and weaknesses, but by the fifth grade of elementary school, the most notable feature of children's cognitive performance was the similarity in level and variability of their scores. [H.W. Stevenson, J.W. Stigler, S.Y. Lee, G.W. Lucker, S. Kitamura, and C.C. Hsu, "Cognitive performance and academic achievement of Japanese, Chinese, and American children," *Child Development* 56, (1985):718–734.]

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School Breaks Mold and Shows Results

by Bill Graves

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COLLEGE PARK, MD—School began only two weeks ago here at Paint Branch Elementary, but Miriam Berdichevsky, 8, thinks it's time for a promotion.

"If it is too hard, I'll move back," the shy girl tells her principal, who's all for the move.

Miriam is not exactly advancing to a higher grade level; this school near the edge of Washington, D.C., has no grades.

Students here are grouped according to their academic needs rather than their ages. Children learning the alphabet are in one class; those learning to read words are in another. Though ages vary among students in a given class, their educational needs are the same—and that, teachers say, makes them easier to teach.

This is the kind of break-the-mold school that President Bush advocates in his education reform strategy, America 2000.

It also has features envisioned in the school improvement act pushed through the Oregon Legislature this year by Rep. Vera Katz, D-Portland.

Under the new Oregon law, the state Department of Education must test some models for ungraded primary schools next school year. It then must report to the Legislature in 1993 whether it is feasible to require all schools to adopt the structure. Kentucky and British Columbia have already decided it is feasible and ordered all their schools to wipe out primary grades.

Even without orders, a growing number of schools in Oregon and other states are trying the ungraded structure. A few schools in Portland—including Sabin, Boise-Eliot and Beach elementary schools—are experimenting with mixed-age grouping on a limited basis in selected classrooms.

"When it is done well, there are better payoffs academically," said Rebecca Severeide, early childhood specialist for Portland Public Schools. "Some of our best and brightest teachers are seeing that this makes sense for children, not only for their academic development, but also for their social development."

Teachers are finding it increasingly difficult to teach in traditional classrooms because of the growing economic, cultural and academic diversity of their students. They must teach the same lesson to students who have little in common except their ages.

During a weekend retreat four years ago, Principal Linda Dudley and her staff at Paint Branch decided on a more fluid structure after concluding there was no reason to group children by age. Just as one child walks at eight months while another waits until 16 months, so some students begin reading in preschool while others are not ready until the second grade.

There are immediate social advantages to mixed-age grouping. No child flunks at Paint Branch. No child is frustrated by assignments too difficult or by lessons already learned. No one is led away for remedial work or enrichment sessions for the exceptionally bright. Every child succeeds. This success fuels motivation, quashes discipline problems and pushes Paint Branch's test scores higher every year.

"Motivation is very high because they really do see everyone making it," said Dudley, a no-nonsense woman with a doctorate in education and a reputation for innovation. "Once children understand they can do it, they will do it. A child doesn't opt to stay behind."

Paint Branch's success is remarkable because it is not simply drawing affluent, middle-class students who've already learned to read in preschool. Two-thirds of its students are black and from low-income homes—children who as a group typically fare poorly in most American schools.

"Are you really teaching if the kids come to you already knowing how to read?" asks Dudley.

The school's success has not gone unnoticed in Prince George's County School District. About a third of the district's 113 elementary schools have moved into some stage of mixed-age grouping, though few have gone as far as Paint Branch.

Dudley has no doubt that eliminating grade levels is the chief reason student performance has climbed at her school. Less than five percent of the 600 students in the school perform below grade level; most are far above. By contrast, at least 14 percent of Oregon's students are reading below grade level, and the proportions are much higher in schools that are dominated, as is Paint Branch, by poor and minority children.

In reading, for example, all but three of Paint Branch's 85 fourth graders were at or above grade level. Nearly half were working at the sixth- and seventh-grade levels, a few even higher. This despite the fact Paint Branch students spend only about half as much time on reading as most of the 110,000 students in the district. That's because it is a magnet school that puts unusual emphasis on math and science as a way of attracting students for desegregation purposes.

Every student becomes a solid—and devoted—reader by the time he leaves sixth grade, said Dudley.

"There is not a child down there who does not enjoy reading," she said.

The students do equally well in math. Teachers say one of their biggest problems is finding challenging material for third- and fourth-grade age students who have soared beyond sixth-grade levels. Many students are ready for the eighth-grade academics when they leave Paint Branch. One student last year skipped junior high altogether.

Paint Branch teachers have built a complicated organization to give students the freedom to advance at their own paces. The 600 students are divided into four groups, each led by a team of teachers. The groups represent four broad steps spanning an academic spectrum from kindergarten to sixth grade and beyond. In the primary team, for example, seven teachers are responsible for 150 students ages six to nine. The teachers group the students into home rooms based on reading levels but will regroup students as needed for mathematics, science and other classes.

Students have a say in when they move to a higher team and in setting academic goals for themselves. Ben Sedlask, 7, a second grader in conventional school, has already moved to the intermediate team, which includes students through age 10. He has the option of moving still higher because he is ready for sixth-grade level mathematics.

But Ben is comfortable with his team and recently decided he will stay and work more on reading and writing, subjects in which he is not as advanced.

By the time they reach the third level, simply called the west team, students have solid reading skills and are grouped according to their levels in math. Reading is totally individualized for the highest group, the east team composed mostly of 10- and 11-year-olds, but the students still work in groups on math. About a third of the team is ready for algebra.

The grouping system differs from tracking, a form of ability grouping generally frowned upon by educators, in that it is flexible and allows students to advance when they are ready. Some Paint Branch students stay at the primary level for four years. But once they master the basics, they often advance quickly, skip groups and catch up with students their ages.

The beauty of the gradeless structure is that it does not allow social promotion—the common system in traditional schools of advancing students on the basis of their age whether they are ready to move up or not, said Shirley Glick, curriculum director for Portland schools.

Students who typically become misfits in conventional schools—the exceptionally bright, slow learners and children with learning disabilities—all seem to find a place at Paint Branch. Students who take Ritalin to control hyperactivity or attention deficits often can give up the drug after a few weeks at the school. Four years ago, the school enrolled 300 children, 40 of whom were in special education. Now the school enrolls twice as many students, but only eight are classified in special education—and they don't know it.

Paint Branch is not a quiet school because teachers often have students working in groups on projects or tutoring one another. A noisy bustle like you'd find in a busy post office or other place of business rolls through the school. But discipline problems are rare.

In the intermediate wing one morning, about 60 students sit quietly on a rug while a teacher reads them a story. Among them are Rahman, 9; Ronald, 10; and Kyle, 11—formerly severe discipline problems at other schools. They are now engaged students. As with many of the troublemakers, the principal put these three in more advanced groups. More academic challenge and the company of more mature students is usually all it takes to settle them down, she said.

The school's unusual structure fosters other innovations. To work together, teachers often remove the walls separating their classrooms and launch projects that integrate various subjects. Last year, for example, intermediate students spent weeks at a nearby stream, studying how it was being polluted and affecting Chesapeake Bay into which it drained. Lessons in mathematics, geography, history, science and reading were all rolled together through the project.

"We are creating new teaching techniques as we go," said Laith Keane, a teacher on the team. "My brain never stops anymore. This is the way school should be."

Students on Keane's team took first and second on group projects for fourth graders in the district's science fair. The first-place team, dominated by third graders, decided on its own to study the effects of color on heat absorption. It painted aluminum cans, filled them with water, put them in the sun, measured the temperature increases and charted the results. The competition was scrapped this year because the quality of projects from other schools was so poor.

Dudley wants to push the school structure further from group instruction toward more individualization. During summer school, her teachers are experimenting with ways to give students nearly full control over their learning and are seeing promising results.

But these changes do not come easy. Parents worry when they do not see their children assigned to a specific grade level. The principal says the school's gradeless structure at times becomes an "administrative nightmare." Some teachers have trouble working with other teachers, sharing students and giving up the comfort and control of having their own class.

But most teachers at Paint Branch say they would not want to go back to the old ways because they didn't work as well. Students love the gradeless system, teachers say. It may be harder for teachers, said teacher Jennifer Beard, but it works best for students.

"Let's put what works best for the kids first," she said. ◀

The Case for Untracking

by Anne Wheelock

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■ *What does it take to replace tracking with heterogeneous grouping? Successful schools identify nine characteristics.*

For years, American schools in pursuit of reform have been caught between two competing demands: mandates for excellence and mandates for equity. Yet, quietly, an increasing number of schools are moving to offer both high-quality education and equal access to knowledge. How? By dismantling unproductive grouping practices that have undermined education for all but a few students. We call these schools "untracking schools."

Since 1990, the Massachusetts Advocacy Center, with the support of the Edna McConnell Clark Foundation, has identified untracking middle schools across the country in an effort to document their success in promoting both excellence and equity for all students. Approximately 900 letters to educators around the country produced some 250 nominations of high schools. We asked each of them to complete a detailed questionnaire. Their responses along with site visits and telephone interviews revealed clues to the process of untracking and lessons for others considering alternatives to tracking. What we learned is testimony to the resourcefulness, persistence, passion for excellence, and capacity for risk-taking that characterize the best of our educational leaders.

What does it take to replace a comfortable practice like tracking with alternatives? Educators identify nine ingredients.

A Belief That All Students Can Learn

The direction that untracking takes in a given school evolves from a commitment to the learning of all students at high levels. Untracking schools view

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reform of grouping practices as a means to an end, not an end in itself. While the *means* of untracking include eliminating separate groups of students categorized by ability and providing equal access to valued knowledge to all students through reshaped curriculum and instruction, the *goal* of untracking is improved learning for all students within democratic school communities.

"Academically, we're working to raise the floor *and* raise the ceiling," notes Karla Deletis, superintendent of schools in Wellesley, Massachusetts. John D'Auria, principal of the Wellesley Middle Schools, adds:

> If tracking would help us accomplish our goals at this school, then we would use it. But we believe in producing active learners, critical thinkers, and risk-takers, and tracking our students by ability quite simply doesn't allow us to achieve our goals.

This belief in untracking sustains educators throughout the demanding process of organizational change. As Donald LeMay, principal of Valley Junior High in Carlsbad, California, stresses, "Untracking is a challenging proposition. No one is going to do this if they do not believe it is possible and necessary."

A Belief in Change as a Process

A second characteristic of untracking schools is their orientation to institutional change, not as an event but as a comprehensive process that touches every aspect of school life. While at first blush untracking focuses primarily on the regrouping of students, success is unlikely without reforms in curriculum, instruction, assessment, and counseling that complement the new grouping arrangements.

Classroom reforms that support heterogeneous grouping typically reflect a commitment to "leveling up" rather than "watering down" practice. As John Delaney, principal of the Parker Middle School in Reading, Massachusetts, reports, "When we are selecting a new curriculum or introducing a new teaching approach for heterogeneous classrooms, we select the approach we would traditionally choose for our most facile learners." What Delaney and other educators emphasize is that curriculum and instruction suitable for multi-level groups must draw from the conceptual, inquiry-based curriculums and methodologies often reserved only for those students labeled gifted and talented.

Thus, curriculum and instruction in untracking schools often focus on developing thinking skills in content areas through a variety of interesting learning projects. Sometimes these schools use a curriculum like Philosophy for Children, which might have been reserved for top-track students but that works equally well, perhaps even better, with heterogeneous classes. Sometimes they initiate a curriculum that acknowledges new thinking about multiple intelligences such as ***Immigration 1850***, developed at Howard Gardner's Project Zero. Or they might use a curriculum specifically designed for heterogeneous groups, like Foundational Approaches in Science Teaching (FAST), developed at the University of Hawaii. In other cases, teachers design their own curriculum, which is frequently thematically organized, experiential, and oriented to a variety of cultural perspectives.

High Expectations for All

Third, untracking schools purposefully weave norms of high expectations and inclusion into the entire fabric of school life. These schools avoid retaining students in grade or segregating them through pull-out approaches. Instead, recognizing that some students need second, maybe even third, chances for success, they offer mastery learning, extra periods for review of particular subjects, and extended days or school years for vulnerable students. Rather than assume that only some students need preparation for post-secondary education, these schools counsel all students for the probability that they will seek higher education at some point in their lives.

In addition, since untracking schools define extracurricular activities as sources of learning in their own right, participation is based on students' interests (sometimes reinforced by a contract stipulating attendance and commitment) rather than on selection or eligibility criteria. At Jericho Middle School in New York, for example, students with physical disabilities may be full members of the cheerleading squad. Further, if the number of students trying out for the class play exceeds the number of speaking parts available, the school puts separate productions into rehearsal and assigns those students enrolled in onstage parts in one production to backstage roles in the second. Schools like Jericho distribute scarce resources—donated tickets to community sports and cultural events, adult mentors, opportunities for field trips, access to the computer lab, and the like—fairly so that *all* students can expand their horizons.

In untracking schools, all students, not just a few, are acknowledged for their contributions, progress, and achievement through "Good Citizen Honor Rolls" and postcards sent to *every* parent. Similarly, they try to ensure that high-status roles—student government representatives, office helpers, dispute mediators, school tour guides, hall safety guards, and cross-age tutors—are open to all, including special education students. Finally, in schools with culturally diverse populations, opportunities for learning honor nondominant cultures and languages by incorporating aspects of students' home cultures into all domains of school life—including morning announcements, hallway bulletin boards, thematic curriculum, and two-way language learning.

Such changes in routines reflect a deep commitment to core beliefs about the role of schools in developing intelligence and expanding opportunities for student success. As schools untrack, they play out beliefs that school practices should nurture all dimensions of intelligence rather than define and measure fixed ability. Second, they reveal a commitment to developing students' aspirations rather than circumscribing students' dreams. They also treat students as citizens of a learning community rather than products of an assembly line. Finally, educators in untracking schools act on the belief that persistent effort rather than inborn ability is a precursor to success in life and the basis for lifelong learning.

A Partnership of Leaders and Teachers

Fourth, the relationship between the principal and teachers in untracking schools is critical to their success. In these schools, principals involve a variety of constituents in developing the mission of the school, articulate that mission in a variety of arenas, and ensure that the mission is fulfilled. In doing so, they may have to challenge traditional beliefs about child development and intelligence, nurture alternative belief systems, assess the potential leverage for institutional change, negotiate for resources, and open doors to resources so that teachers can strengthen their own learning.

Just as principals in untracking schools are called on to be risk-takers, they must foster conditions for risk-taking among their staff. They do so by encouraging teachers who try innovative ideas to describe their successes and failures to others, while promoting self-assessment among teachers by temporarily suspending teacher evaluations. These principals themselves must have a thorough knowledge about research on tracking, an understanding of instructional alternatives, and some grounding in organizational change. In addition, they must be able to act politically to address the concerns of all constituent groups. In response to skeptics, they must be ready to respond in a compelling way to questions like, "How do you plan to make sure that my advanced child won't be bored in heterogeneous classes?" and "How can you ensure that my child is not going to be overwhelmed when you mix her in with smarter students?"

At the same time, principals in untracking schools must work with teachers to introduce reform where it really counts: in classroom practice. This requires gauging the readiness of staff for change and working with teachers to identify appropriate professional development approaches, including teacher-directed efforts. As teachers from the Graham and Parks School in Cambridge, Massachusetts, emphasize:

> It's what happens with kids *after* mixed-ability grouping occurs that matters. This must be put into teachers' hands—by empowering them, having them *critically* examine the current program, investigate other schools through visits or reading, and then develop their own ways.

The Value of Parent Involvement

Looking back on their untracking experiences, principals observe that parents can make or break school change. They emphasize the importance of involving parents at an early point in planning and implementing heterogeneous groups.

Some schools educate parents about alternatives to tracking by inviting them to attend classes using new teaching approaches or programs introducing new curriculum. By piloting new approaches and publicly reporting the results, other schools persuade parents that untracking strengthens the mainstream of the school so that all students will master complex material. Still other schools take advantage of a phase-in process to allow parents a choice between heterogeneous and homogeneous grouping until all teachers are prepared to teach all children effectively.

Often the most vocal parents in opposition to heterogeneous grouping are those who expect their children to enter gifted and talented programs. These parents may be politically powerful and sophisticated in countering arguments in favor of heterogeneous grouping. However, they may reconsider their position when they understand that inclusive schooling will offer all students an education that is sometimes reserved only for students labeled gifted.

A Hospitable Policy Context

While some schools are untracking with little encouragement from the formal educational hierarchy, many gain momentum from supportive district- or state-level policies.

For example:

- The Massachusetts Department of Education (1990) has not only issued a policy advisory and sponsored professional development programs to encourage alternatives to ability grouping, but has tied discretionary dropout prevention and remedial grant funding to untracking.
- California's Middle Level Partnership program and the Department of Education's report *Caught in the Middle* (1987) have encouraged interdistrict clusters of middle schools to pool resources to initiate and sustain heterogeneous grouping.
- New York's "trainer for trainers model" has created a pool of professionals who offer staff development and technical assistance to schools implementing mixed-level classrooms.
- In Nevada (1990) and in Maryland (1989), policy studies and advisory positions regarding appropriate practices for adolescents suggest that middle-level schools group their students heterogeneously.
- In districts—including Ann Arbor, Michigan, and San Diego, California—central office and school staff have worked with school board members to review and publicize research on tracking. They've also initiated studies of local tracking patterns, resulting in a formal policy and timetable to promote alternatives.

In the absence of a favorable public policy context, many schools forge ahead, drawing support from positions taken by the National Council for Teachers of Mathematics, the National Middle School Association, and the research of Jeannie Oakes (1985) and others. Middle schools especially have found that recommendations for heterogeneous grouping by the Carnegie Council on Adolescent Development (1989) can provoke discussion and generate support for untracking. They also report that these sources give proposed reforms credibility and encourage school decision makers to take risks they might not otherwise take.

A Multi-Year Plan

The complexity of change required for successful heterogeneous grouping requires planning, and many schools acknowledge this by adopting timetables that span three to seven years.

A school's plan may reflect the numerous steps necessary to prepare for untracking: disseminating research about tracking and its alternatives, visiting other schools with heterogeneous classrooms, researching curriculum appropriate for diverse classrooms, and identifying resources for staff development. The plan may also outline a specific timetable for implementing heterogeneous grouping in whatever form the school has chosen—whether flexible grouping, "controlled heterogeneity," grouping for multidimensional intelligence, inclusive integration of students with all levels of disabilities into the school mainstream, multi-language or multi-age grouping.

Productive planning assures those most uncomfortable with change that they will not be forced to change overnight. It can also provide a framework for shaping classroom practices to mirror research findings. As Sandra Caldwell, principal of the Middle School of the Kennebunks in Kennebunkport, Maine, reports, "We question practically everything. We ask whether our practices align with research, and when we find gaps, we work team by team to figure out action plans to close them." In short, untracking schools may have not one, but many, plans for change implemented at different times by different actors.

Purposeful Professional Development

Untracking schools agree that reform cannot take place without focused professional development. Some have engaged in activities that seek to strengthen the school as an organization through goal-setting and team-building exercises. Others begin with a review of "high expectations" teaching strategies, sometimes using the Teacher Expectations, Student Achievement (TESA) program to reduce the potential for differentiated instruction within heterogeneous classrooms. Many schools have introduced all their teachers to research and training in cooperative learning and complex instruction. Some, like Milwaukee's Parkman Middle School, have designated one or more teachers in incorporating new techniques into their classrooms. Finally, staff development must also accompany the introduction of any new curriculum—whether it is a packaged one or one designed by teachers.

Phase-In Implementation

Finally, untracking schools recognize that reform does not happen overnight. To the contrary, given the deep changes in school culture, curriculum, and instruction that accompany successful untracking, schools often introduce alternatives in stages. Their strategies differ, depending on such factors as teachers' readiness, parents' concerns, and availability of resources for professional development, curriculum change, or instructional innovation. Whatever the beginning point, most schools understand that the end point is a more-inclusive learning community.

Some untracking schools start by merging the bottom tracks in all or most subject areas into the middle tracks, while providing extra support through co-teaching or additional time for tutoring. Other schools phase in heterogeneous grouping beginning at the lowest grade level and add a grade every year. Still other schools introduce changes department by department, as subject-area teachers identify and prepare to implement new curriculum specifically designed for groups of diverse learners. Finally, schools that have already organized into teams or schools-within-a-school may untrack one team at a time—with the ultimate goal of introducing heterogeneous grouping schoolwide.

Is It Worth It?

While untracking demands focused, purposeful attention over a number of years, seasoned educators tell us that it *is* worth the effort. In untracking schools, achievement is up for "low" and "average" students, while undiminished and sometimes improved for "high" students. Untracking schools cite improvements in discipline, school climate, and teacher morale. As Roene Comack, a teacher at Harding Middle School in Cedar Rapids, Iowa, says, "I've never worked so hard being creative, but I'm also convinced that I'm teaching better." And Sue Galletti, former principal of Islander Middle School in Mercer Island, Washington, speaks for many educators involved in untracking when she concludes:

> What I've *stopped* seeing is very talented, bright children feeling they're not worth a bit of salt because they haven't made it into an elitist program for students labeled "gifted." I'm seeing all kids realize there are lots of kids who can contribute to learning even when what they contribute is different from them.

This is excellence. This is equity.

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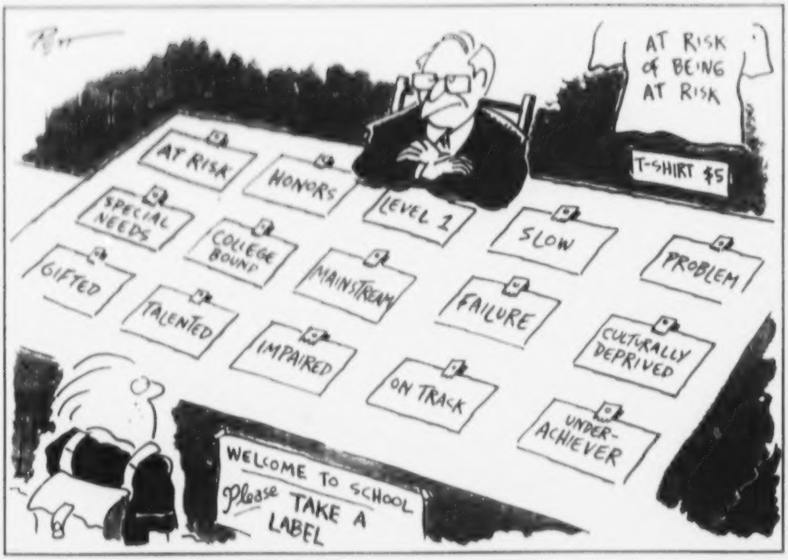
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